

SEPTEMBER 1926 ~ No 248

Monthly

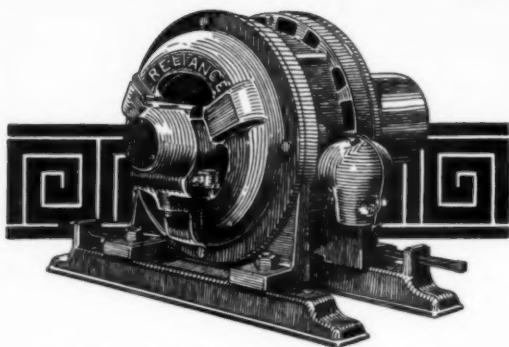
A Reference for Buyers

HITCHCOCK'S  
**MACHINE  
TOOL  
BLUE BOOK**

25,000  
Controlled Circulation

Published By  
HITCHCOCK PUBLISHING CO.  
508 So. DEARBORN ST.  
CHICAGO

FOR INDEXES SEE LAST PAGES



We are daily coming into contact with jobs that can be done better and quicker with motor drive and suitable control. Many users have found our experience helpful. We shall be glad to work with you and take our chances on showing you how to get results that will justify an investment in Reliance Motors.

**Reliance Electric & Engineering Co.**  
1050 Ivanhoe Road, Cleveland, Ohio

*Branches:*

Boston  
Cincinnati

New York  
Detroit

Philadelphia  
Chicago

Pittsburgh  
Birmingham, Ala.

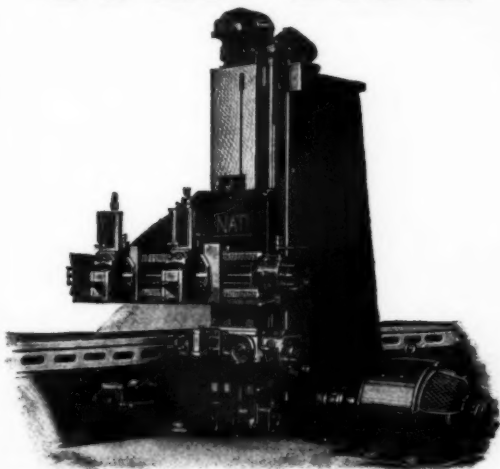
*We specialize in motors, sizes 1/2 to 250 h. p. constant and adjustable speed  
D. C.; squirrel cage and slip ring A. C.*

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**RELIANCE <sup>A.C.</sup><sub>D.C.</sub> MOTORS**

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# CINCINNATI HYPRO OPEN SIDE



## ***High Production Features:***

**Selective Dial Feed  
Rail Clamping Device  
Instantaneous Rail Lift  
Rapid Power Traverse  
Forced Lubrication  
Combination Steel  
Herringbone and Spur Gear Drive  
Long Inverted Dovetail Down-Slide**

## **The Cincinnati Planer Co.**

**Cincinnati, Ohio**

# Barber-Colman Production Milling Cutters

make the machine on which  
they are used a better service  
unit.

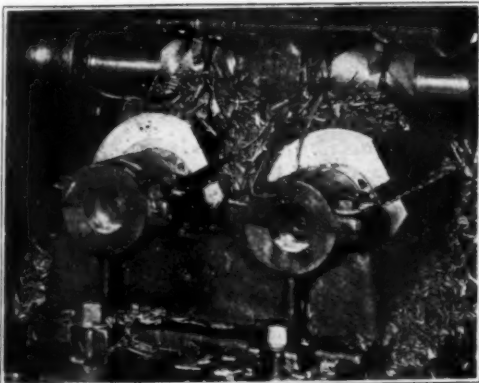
See them in operation at the  
National Steel and Machine  
Tool Exposition, Municipal Pier,  
Chicago, September 20-24.

BOOTH 338

**Barber-Colman Company**

General Offices and Plant

ROCKFORD, ILL., - - U. S. A.





*See the Exhibits of*

# **Cleveland Automatics**

*at the*

**Sixth Annual New Haven  
Machine Tool Exhibition,  
New Haven, Connecticut  
September 7-8-9-10, 1926**

*and at the*

**National Steel and  
Machine Tool Exposition,  
Municipal Pier, Chicago  
September 20 to 24, 1926**

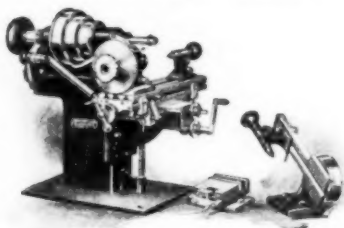
This will give you the opportunity of securing first-hand information as to the latest developments in Cleveland Automatics. If you can't be there, write for our latest Catalog—pleased to send it.

**Cleveland Automatic Machine Co.**  
**Cleveland, Ohio**

# HARDINGE

## "Cataract" Quality

Is Built Into Every Part  
Of This Bench Miller!



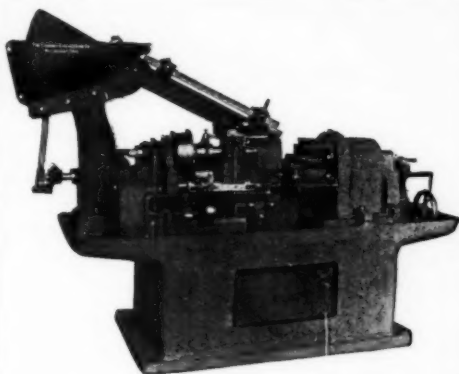
YOU WANT speed, accuracy and economy, and that is just what our long experience has enabled us to build into this ultra modern Bench Miller.

You will be greatly pleased with its unusual adaptability, and its dependableness to take care of any milling job within its range.

No obligation incurred by asking us for more information, or for our Catalog.

*Let us hear from you*

**Hardinge Brothers Inc.**  
4149 Ravenswood Ave.  
Chicago, Ill.



## **"This is Production"**

**2800 Pointed and Threaded  
1/2" Bolts Per Hour—  
One Operator!**

**WHEN USING**

**Four Economy Automatic Combined  
Pointing and Threading Machines.**

**Capacity 1/4"x1" to 3/4"x5 1/2"  
Bolt and Cap Screws.**

**The Economy Engineering Company  
WILLOUGHBY, OHIO**

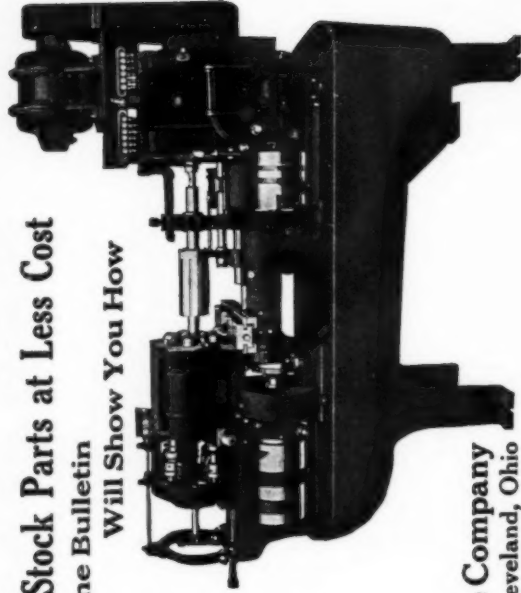
# Produce More Bar Stock Parts at Less Cost

The Model C Acme Bulletin

Will Show You How

Write to-day for a copy of the new Model C, Five Spindle Acme Bulletin. It will describe equipment with which other manufacturers have cut their costs—often to a very large extent.

*Get this FREE BOOK*



**The National Acme Company**  
700 East 131st St., Cleveland, Ohio



## Lowest Cost Shaping and Slotting

7 in.  
Shaper  
Stroke



3½ in.  
Slotter  
Stroke

For machining tools, dies, models, etc., and for shaping and slotting all kinds of light work, there's nothing quite so satisfactory as—

### The Rhodes Shaper and Slotter

It is a handy, accurate, efficient, high grade machine tool in every respect, and is more readily manipulated on small work than are the larger machines. It's a splendid "buy."

*Ask your dealer or write for  
CATALOG H22*

**The Rhodes Mfg. Company**  
944 Park Road,     :-     Hartford, Conn.

**SHAPERS—RHODES—SLOTTERS**

# National-Cleveland Cutters

*Quality Tools for Over 20 Years*

**HEAVY DUTY**

**Gear Shaper Cutters—Hobs—Reamers—  
Milling Cutters and Special Tools**



**"NATIONAL-CLEVELAND"** Tools are 100% producers. They give the maximum hourly production and set a new standard wherever employed. They may be had for all general and special purposes. Let us show you how ably they will fit in your work.

**"NATIONAL-CLEVELAND"** Service is no farther away than our nearest office.

## **The National Tool Company**

**11200 Madison Ave., Cleveland, Ohio**

**NEW YORK**  
41 Murray St.

**PHILADELPHIA**  
816 Chestnut St.

**DETROIT**  
5-116 General Motors Bldg.

**CHICAGO**  
624 Madison Terminal Bldg., 9 South Clinton St.



## Threading at 3000 R. P. M.

These rods are being threaded with a No. 8-32 thread 5-16" long, at an average production of 1400 pieces per hour on our Standard High Speed Tapping Machine.

*How about your threaded work?*

**Leland-Gifford Co.**  
Worcester, Mass., U. S. A.

**BRANCH OFFICES:**

Boston  
Cleveland

Chicago  
Detroit

New York  
Rochester



# Cutter and Tool Grinders

For All Classes of Work

No. 12  
Cutter and Tool  
Grinder



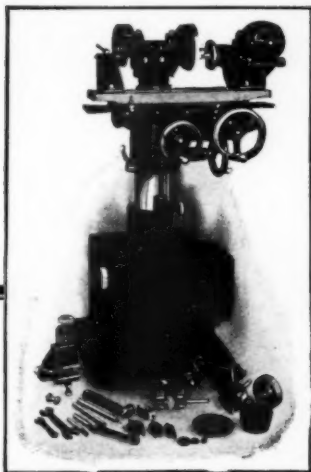
The Nos. 10, 11 and 12 give a range of sizes that will take care of any kind of cutter and tool work as well as light cylindrical grinding.

*Let us recommend the proper sizes for your work*

**LANDIS TOOL COMPANY**  
Waynesboro, Pa.

New York Office: 30 Church Street    Detroit Office: 5928 Second Blvd.  
Chicago Office: 618 W. Washington Blvd.





**Grand Rapids No. 1 Universal  
Cutter and Tool Grinder  
With Self-Contained Motor Drive**

OUR No. 1 UNIVERSAL, shown above, is an ideal machine for the shop using cutters, reamers and similar tools.

OUR No. 2 UNIVERSAL is much like the No. 1, with the addition of the scientific grinding of twist drills.

SPECIAL BULLETINS illustrate and describe these splendid machines, as well as our larger Nos. 3 & 4 Universal Cutter and Tool Grinders—also Grand Rapids Drill Grinders and Tap Grinders. Write for Bulletins of the machines in which you are interested. We shall be much pleased to send them.

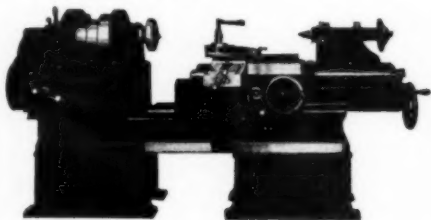
**Gallmeyer & Livingston Co.**  
342 Straight Ave., S. W., Grand Rapids, Mich.

# **The Ideal Lathe**

*FOR*

## **Railroad or Jobbing Shops**

Here is a lathe that is always ready for practically every job, without tearing down and setting up, and it is a real lathe on all of them. It is so sturdy in construction that it absorbs the vibration of the heaviest cuts.



### **RAHN-LARMON**

#### **18<sup>3</sup>/<sub>8</sub> / 36" Extension Bed Gap Lathe**

There is nothing else quite so satisfactory as the Rahn-Larmon Extension Gap where there is a variety of lathe work to be done.

It reduces to a minimum the amount of equipment required, saving in investment cost; it saves in operating time, reducing labor cost; and there's hardly a reasonable limit to the work you can call upon it to do.

Made in sizes 18<sup>3</sup>/<sub>8</sub> / 36", 22<sup>3</sup>/<sub>8</sub> / 40" and 28<sup>3</sup>/<sub>8</sub> / 50" for belt or a. c. or d. c. motor drive.

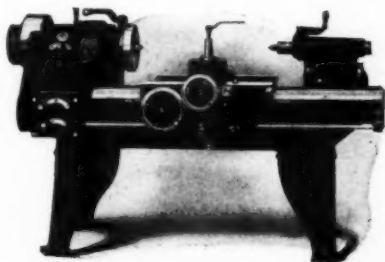
*Let's compare notes. This may be just what you need. If not, there's no harm done.*

## **The Rahn-Larmon Co.**

**CINCINNATI, OHIO, U. S. A.**

# **LeBLOND**

## **Rapid Production Lathes**



### **LeBLOND 17" GEARED HEAD RAPID PRODUCTION LATHE**

Built in 11" and 17" sizes with either geared or cone driven headstock. They are essentially simple, heavy duty lathes for rapid production of plain turning and facing work. When furnished with automatic feed stops and connected rests they are exceptionally profitable on work in relatively small quantity lots which would not justify the installation of automatic or semi-automatic machines. The various features are described in our literature.

**THE R. K. LeBLOND MACHINE  
TOOL COMPANY**

CINCINNATI,

OHIO

**FOOTBURT**



## **A Single Spindle Footburt Sipp Sensitive Drill**

**Made in three  
sizes of single  
and multiple  
spindle models**

### **More holes with this machine**

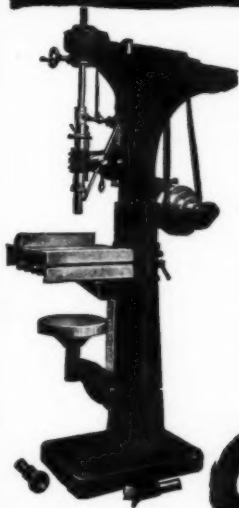
**Why?** Because you can change speeds in two seconds or belts in ten seconds—because the automatic idlers keep the belt pulling to capacity at all times—because the full ball bearing equipment and accurate machining gives a smooth, fast cut.

*Write for No. 650 Folders*

**The Foote-Burt Company, Cleveland, O.**

**FOOTBURT**

# Drilling economy



Avey Ball-Bearing Sensitive Drilling Machines guarantee you "lowest cost per hole" year in and year out, for these 5 reasons:

1. Maximum cutting speed;
2. Reduction in drill breakage; less frequent grinding;
3. Maximum number of operations per machine;
4. Minimum power cost;
5. Minimum floor space.

Besides drilling, you can also use your Avey Drilling Machines for boring—reaming—countersinking—lapping—tapping.

*Ask for bulletins*

**The Avey Drilling Machine Co.**  
**Cincinnati, Ohio**

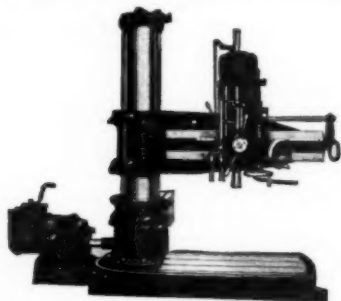
*Representatives in principal cities*

# Avey

## lowest cost per hole!

# Fosdick <sup>Heavy Duty</sup> Radials

**Have the Power, Rigidity and  
Ease of Operation to Meet the  
Demands of the Most Exacting**



**Fosdick Heavy Duty Radials** are made in sizes 2 to 6 ft., for 3/16" to 4" drills. They represent the most rigid and powerful type of Heavy Duty Radials built, are easy to operate, and drive high-speed drills to the limit of their endurance. They are designed to meet the demands of the most exacting users of tools of this kind. Also furnished in sizes 4, 5 and 6 ft. with variable speed motor on arm.

## ***There's a Fosdick for your needs***

The Fosdick Line of High Grade Drilling Machines also includes High Speed Sensitive Radials, 3, 3½ and 4 ft., for drilling and tapping, capacity 1"; Heavy Duty Uprights, 21" to 30", capacity 3/16" to 3"; and Ball Bearing Sensitive Drills, 1 to 6 spindle, capacity to 1½".

***Whatever your drilling needs, write to Fosdick,  
and you'll get the best the market affords***

**The Fosdick Machine Tool Co.**

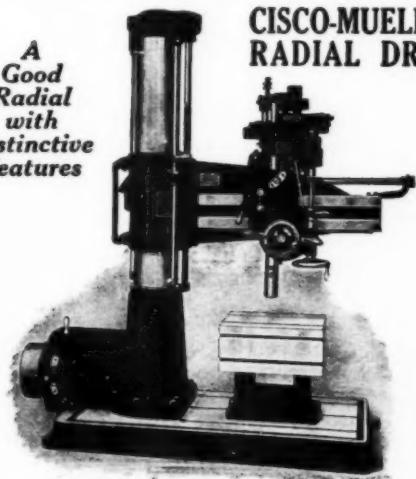
1638 Blue Rock St., Cincinnati, Ohio

# The Radial You Want!

Look them all over before buying, and you are sure to select the Cisco-Mueller, because of its all-around efficiency combined with a reasonable price for quality.

*A  
Good  
Radial  
with  
Distinctive  
Features*

**CISCO-MUELLER  
RADIAL DRILL**



We recently bought outright the Mueller Machine Tool Co., and are continuing the manufacture of their popular radial drill as the "Cisco-Mueller." Some of its features are:—patented stationary column; combination positive and friction feed; simple control; unusual rigidity; combination low and high speed reverse; simple and powerful gear box, making instant speed changes without shock or noise.

*Your drilling problem is ours; will you write?*

**The Cisco Machine Tool Co.**  
1700 Elmore Street, Cincinnati, Ohio

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## **Demco** Drills

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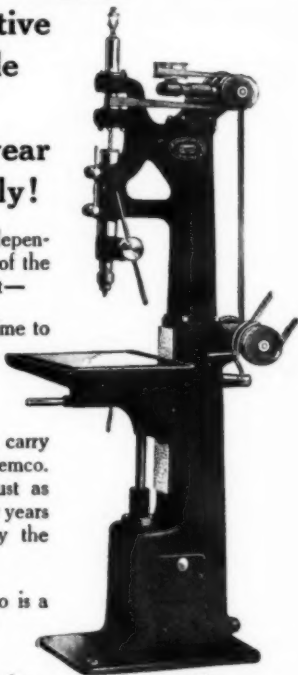
**With a Sensitive  
Drill Spindle  
that  
takes up all wear  
Automatically!**

A spindle that is not dependent on the judgment of the operator for adjustment—

That means no lost time to make adjustments and no worn out parts to be replaced.

You do not have to carry repair parts for the Demco. The drill spindle is just as accurate and good after years of service as the day the Demco was installed.

That's why the Demco is a Dependable Machine Tool.



*Write for information*

Model D—  
1 Spindle Floor Type

**Merit Oil Equipment Co.**

Main Office and Factory:

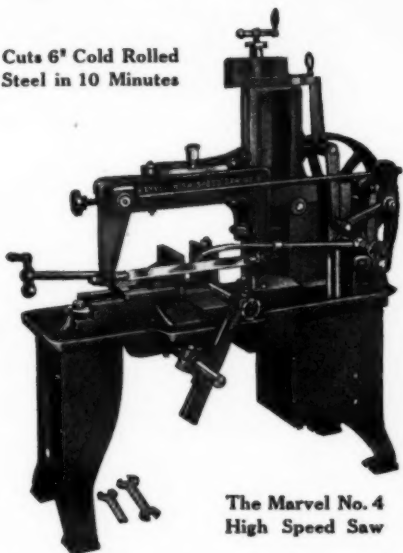
6616 Morgan Ave.,

Cleveland, Ohio



# A Marvel of Speed and Economy

**Cuts 6" Cold Rolled  
Steel in 10 Minutes**

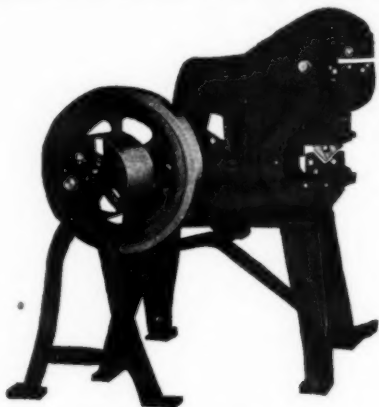


**The Marvel No. 4  
High Speed Saw**

Blade frame can be shifted so as to use up all the teeth in blade. The cutting speed of this machine is a revelation to hack saw users. The blade is always horizontal. Cuts on the draw stroke, with quick return. Adjustable stroke 4" to 6½". Automatic stop at any desired depth of cut. Takes 3" belt. Also furnished motor driven.

**Marvel Hack Saws and Metal Band Saws for every need,  
and each the leader in its class. Write for Catalog.**

**Armstrong-Blum Mfg. Co.**  
**341 N. Francisco Ave., Chicago, Ill.**



**No. 52—Built in Seven Sizes**  
**BELOIT**  
**Combined Power Punches and Shears**

**Series 51 to 56**

The Beloit Combined Power Punches and Shears offer an unequalled combination of simplicity of design, construction, range of capacity, and moderate initial cost.

Invaluable in any plant for punching, shearing and fabricating steel bars or structurals.

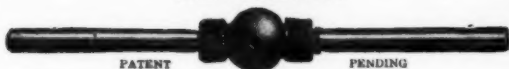
An indispensable equipment for the manufacture of automobile springs and bumpers.

Tell us about your Punching and Shearing requirements. Our line is extensive, and we have a Beloit Machine for your work.

Send for our new catalogue No. 11 which describes the Beloit line of Punches, Shears and Bending Rolls.

**Hendley & Whittemore Co.**  
100 S. State St.,    -:-    -:-    **BELOIT, WIS.**

**STARK  
4<sup>IN</sup>1  
TAP WRENCH**



## A Saving—Not An Expense

Give a man the proper tool and you will get the best work at the lowest cost.

The Stark is the proper tool for Taps, Broaches and Reamers.

Being evenly balanced, it holds the Tap in perfect center. This makes it easy for the mechanic to start his Tap straight.

Being light in weight and the correct size for the diameter of the Tap being used, the mechanic can feel and gauge his work.

His Tap is started straight and he does not put more pressure on the Tap than is needed—the result is that he seldom breaks a Tap.

You get the saving in two ways—no broken Taps to replace and no loss of time in removing the broken Tap.

This saving in 30 days will more than pay the cost of replacing your present equipment with the new Stark.

Worth More but Costs no more than others.

**Evenly  
Balanced**

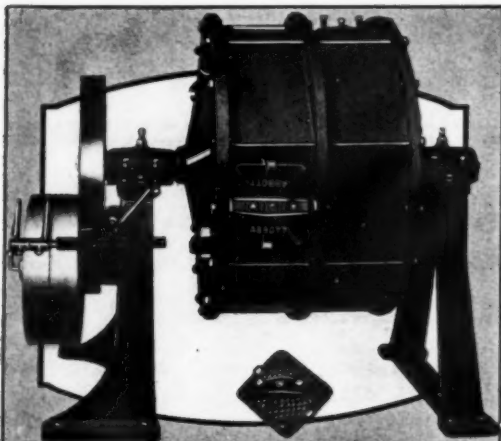


**Easily  
Handled**

*Ask Your Supply Man*

## Stark Products Corporation

3809 N. Clark St., Chicago, Ill.



## 8 to 1

On an average, that's the difference between hand burnishing and using an Abbott Burnishing Barrel for finishing small metal parts. An Abbott Burnishing Barrel will pay for itself within a very short time and, in most cases, do the work better. The chances are, we can show you how to speed up your output, reduce your finishing costs and improve the quality of your finish. Send us samples. We'll be glad to make experiments and recommendations. This costs you nothing and obligates you in no way.

### THE ABBOTT BALL COMPANY

*"Originators of Commercial Ball Burnishing"*

1043 New Britain Ave., Hartford, Conn.

# 300% Increase in Production

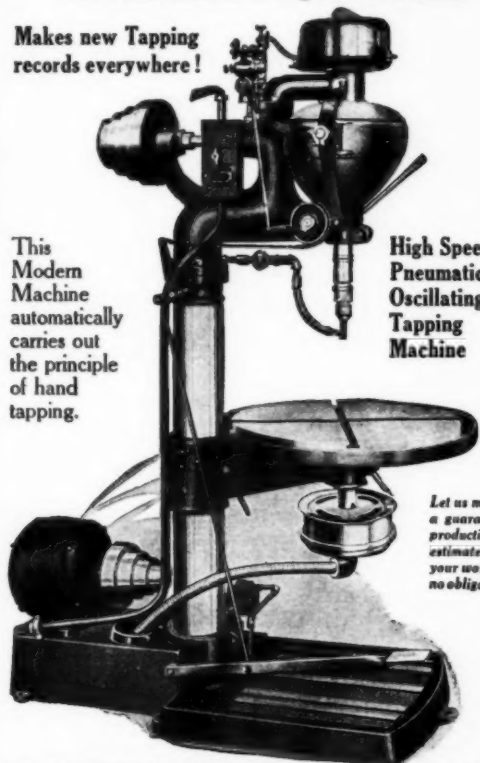
*Is What One Satisfied User Reports*  
**Also Successful in Big Motor Plants**

**Makes new Tapping  
records everywhere !**

This  
Modern  
Machine  
automatically  
carries out  
the principle  
of hand  
tapping.

**High Speed  
Pneumatic  
Oscillating  
Tapping  
Machine**

*Let us make  
a guaranteed  
production  
estimate on  
your work—  
no obligation.*



**W. GATERMAN MFG. CO., Manitowoc, Wis., U.S.A.**



*The*

## "RAREFIED" Dust Collector

Does the Most  
Thorough Work

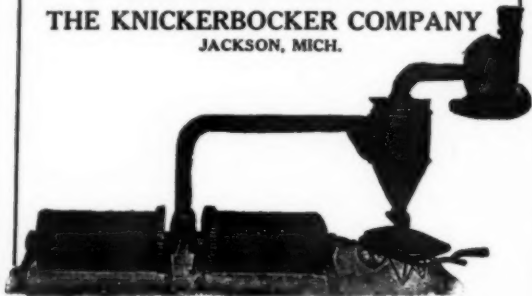
**Knickerbocker Says:** The "Rarefied" Dust Collector goes after the dust and gathers up practically every bit of it! Keeps your shop as spick-and-span as a New England kitchen.

**It Is Successful** with practically all kinds of dust—from emery wheels, sand blasts, tumbling mills, etc. No matter how heavy, gritty or cutting the dust, it does better work *at less cost!*

**There's No Abrasion** of fan parts, and no wear worth mentioning from internal friction, as the dust is collected and automatically discharged before the air reaches the fan.

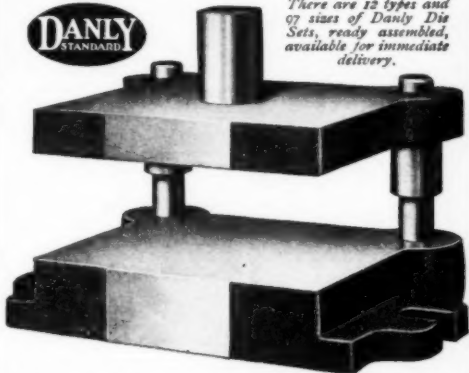
*Some plants are now using more than 25 of these efficient Collectors. Glad to mail complete details, or make an estimate on your work.*

**THE KNICKERBOCKER COMPANY**  
JACKSON, MICH.





*There are 12 types and  
97 sizes of Danly Die  
Sets, ready assembled,  
available for immediate  
delivery.*



## DANLY DIE SETS

*Assembled ready for immediate  
use or in the "knock down."*

You save 20 to 50 per cent. in first cost alone by using **Danly Die Sets**. Think of the convenience of ordering from the 34-page catalog by 'phone or telegraph and obtain delivery immediately from stock.

More than 3,000 companies endorse, use and recommend **Danly Die Sets**. They absolutely eliminate all shearing; cut enormously the time for mounting the dies and setting up on the press. They are a precision tool combining every known refinement in materials, workmanship and design.

*Write, wire or phone nearest warehouse  
for 34-page catalogue*

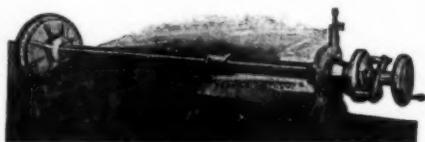
### DANLY MACHINE SPECIALTIES, INC.

4913 LINCOLN AVENUE, CHICAGO, ILL.

DETROIT, MICH.  
1537 Temple Ave.

LONG ISLAND CITY, N. Y.  
35 Wilbur Ave.

# Pedrick Lathe Boring Bars



There are many times when you could profitably use one of your lathes for boring—if you only had the proper appliances at hand.

We can equip you for such work with one of our Lathe Boring Bars. They are made in diameters from 2½" to 6" and various lengths, with a large assortment of cutterheads to meet miscellaneous requirements.

The lathe provides the power, and each bar has a two-change constant feed, hand-controlled or automatic. The bar is rigidly held and is easily taken down and reset without changing the alignment.

Put your boring problems up to us. We have all kinds of new boring machines, from our Standard Portable Cylinder Boring Bar to our new Floor Boring Machines.

## Pedrick Tool & Machine Co.

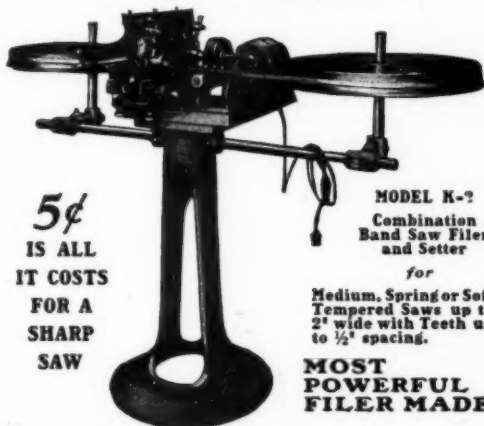
3644 N. Lawrence St., Philadelphia, Pa.

Builders of Portable Cylinder Boring Bars, Crank Pin Turners,  
Portable Millers, Pipe Benders, etc.



# A COMPLETE UNIT THAT

FILES, SETS AND JOINTS BAND SAWS  
IN ONE OPERATION



**5¢**  
**IS ALL**  
**IT COSTS**  
**FOR A**  
**SHARP**  
**SAW**

**MODEL K-2**  
**Combination**  
**Band Saw Filer**  
**and Setter**

*for*  
**Medium, Spring or Soft**  
**Tempered Saws up to**  
**2" wide with Teeth up**  
**to 1/2" spacing.**

**MOST**  
**POWERFUL**  
**FILER MADE**

This machine is heavily constructed with a positive movement of the filing arm, so that all teeth are cut to the same depth in hard spots as well as soft spots in the saw. This means the stopping of cracks and breakage. Saws are filed and set at a speed of 70 teeth a minute.

This machine will save you a lot of money in time and labor, and greatly reduce saw purchases.

It saves the purchase of two separate machines for the work, and does the work in one-half of the time. The machine can be run from any lamp socket of your lighting current.

*Write for Catalog*

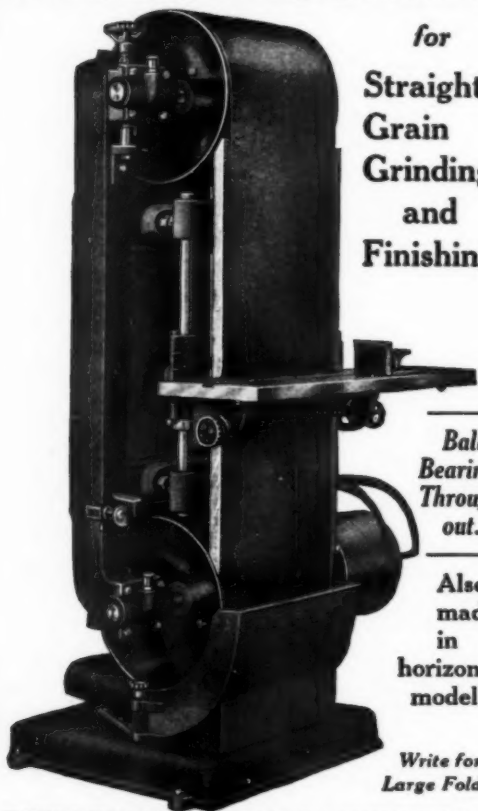
**THE WARDWELL MFG. CO.**

*Manufacturers of Hack and Metal Cutting Band Saw Grinders,  
Circular Saw Filers and Grinders, Etc., Etc.*

**108 Hamilton Ave.,**

**Cleveland, Ohio**

# PEERLESS SURFACING MACHINES



*for*  
**Straight  
Grain  
Grinding  
and  
Finishing**

---

*Ball  
Bearings  
Through-  
out.*

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**Also  
made  
in  
horizontal  
models.**

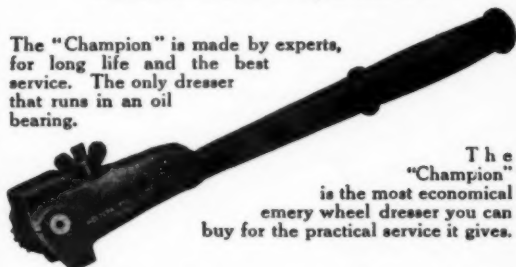
*Write for  
Large Folder*

**PEERLESS SURFACING MACHINE CO., Inc.**  
**TROY, N. Y.**

# "Champion" Emery Wheel Dresser

Outlasts a Dozen Cheaper Dressers

The "Champion" is made by experts, for long life and the best service. The only dresser that runs in an oil bearing.



The "Champion" is the most economical emery wheel dresser you can buy for the practical service it gives.

The *cutters* are made of a special steel, heat-treated and tempered by a special process.

The *sleeve*, furnished with each set of cutters, revolves on the spindle and the cutters in turn revolve on it, providing a more perfect bearing for the cutter wheels.

The patented *spindle bearing*, which is made of steel and thoroughly hardened, serves as a bearing for spindle and a guide for cutting wheels, and it cannot turn in the handle; makes wobbling impossible.

The patented *handle* is heavy and strong, designed for long service, efficiency and economy.

The patented *handle cap* eliminates the old-fashioned set screw and serves as an upper-clamp for spindle bearing. Further, there are no moving parts. On account of absence of wear, the life of handle and handle cap is indefinite.

## Our Catalog also describes

Champion Tool Holders, Champion Expanding Mandrels, Machinists' Vises and Clamps, etc., and our large line of practical, hard-to-beat Shop Furniture. Copy upon request.

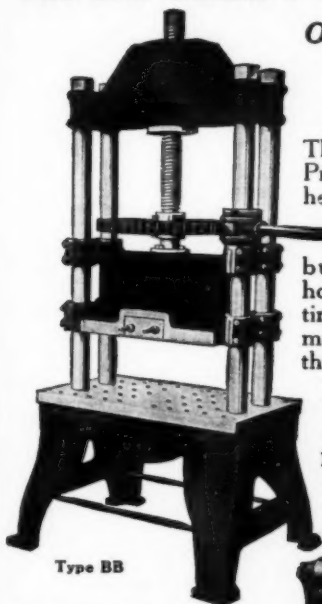
**The Western Tool & Mfg. Co.**  
SPRINGFIELD, OHIO



**F**OR THIRTY YEARS the railroad shops all over the country have continued to buy these time-saving expanding mandrels. If you haven't used them, write us and we will send any size on trial.

**W. H. Nicholson & Co., 117 Oregon St., Wilkes-Barre, Pa.**

# The Die Maker's Best Friend



Type BB

## *One-Man Four-Post Screw Press*

This supremely rigid Press is made for heavier work than our three smaller sizes, but they all save hours of valuable time and labor. One man fits dies quicker than two can do on other machines. They give perfect alignment between punch and die. Type BB has 20x36" table. and 80-ton pressure.

## Surface Grinder

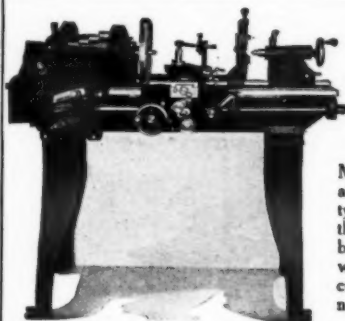
Powerful—rigid—accurate—  
no vibration—no noise—a revelation  
in quiet efficiency. Graduated feeds.

*Details and prices to you  
today for a postal*

**JARECKI MACHINE  
AND TOOL CO.**

Dept. A. GRAND RAPIDS, MICH.





## Another Sidney Lathe

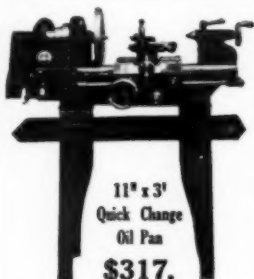
Our 11" x 4'  
Medium Pattern,  
all geared head  
type. It is up to  
the minute with  
built-in features  
which insure ac-  
curacy and eco-  
nomical service.

Write for catalog and prices on the complete  
line of Sidney Lathes. Address Dept. 1801

**The Sidney Machine Tool Co.**  
Sidney, Ohio



## Monarch Jr. Lathes



11" x 3'  
Quick Change  
Oil Pan

**\$317.**

are the smallest members  
of the Monarch lathe  
family. Yet they are the  
"biggest little lathes" built.

The Monarch line of  
lathes includes all sizes  
and types from the little  
9-inch Junior lathe to the  
big, massive 30-in. lathe.  
In this line there is a lathe  
to fill your requirements at  
the price you want to pay.

*Send for Catalog*

**The Monarch Machine Tool Co.**

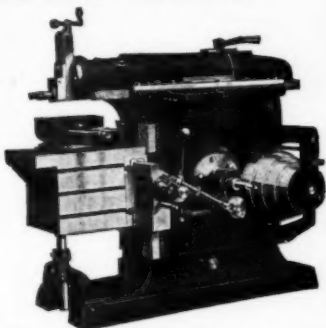
206 Oak Street, Sidney, Ohio

# SHAPERS

12", 14", 16"  
Plain Crank,  
16", 20", 25"  
B. G. Crank,  
either Cone  
Driven or  
through Speed  
Box.

Belt Shifter  
Regular Equip-  
ment All Cone  
Driven Shapers.

32" Back Gear-  
ed Crank, Sin-  
gle Pulley  
Drive.



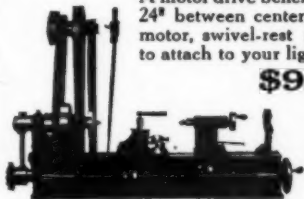
The Smith & Mills Co., Cincinnati, O., U.S.A.

## Just-Rite Lathes

Made in Sizes from 10-in. to 20-in.

A motor drive bench lathe, 10" swing,  
24" between centers, complete with  
motor, swivel-rest and pan, ready  
to attach to your light socket.

**\$98**



Has Power Feed

**JUST-RITE**  
for turning,  
boring, mill-  
ing and drill-  
ing (not screw  
cutting).

Order one by express. Weight, 230 lbs.

A. V. Carroll Machine Tool Co., Norwood,  
Cincinnati, O.



**Write!**

TOLHURST Chip Wringers reclaim  
6 to 15 gallons per load and handle  
three or four loads an hour!

**Tolhurst Machine Works**  
Troy, New York

## POWELL VALVES

**LET A POWELL BLOW GUN**  
**AIR VALVE—**  
*Blow your Turnings or Borings away!*



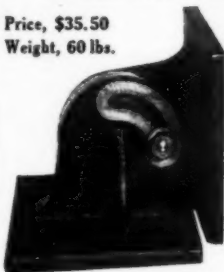
**The Wm. Powell Co.**  
2525 Spring Grove Ave., Cincinnati, O.



## Universal Angle and Surface Plate

For Drill Press, Shaper, Lathe or Miller

Price, \$35.50  
Weight, 60 lbs.



The handiest equipment in the shop. Speedily set to any desired angle, and when locked becomes a *rigid* fixture.

On the bench it serves as a convenient surface plate for testing and laying out work.

Each face is 9"x10". When assembled, it makes an angle plate 10" square. Made from select gray iron, accurately machined and graduated.

**UNEQUALLED VALUE.**

*Can ship promptly.*

**Advanced Engineering Co.**  
464-468 Seventh St., San Francisco, Calif.

**No Smoke**

**No Fumes**



**Non-Poisonous**

**Non-Inflammable**

**Non-Explosive**

**KASENIT No. 1**  
For Fine Work and  
Very Rapid  
Hardening

Sold in ½ lb., 1 lb.,  
3 lb., 5 lb. and  
10 lb. tins

**KASENIT No. 2**  
For General  
Hardening

Sold in 25 lb. and  
50 lb. kegs

*Write for Booklet on hardening. Ask your dealer or write—*

**KASENIT COMPANY, 122 Greenwich St.,  
NEW YORK, N. Y.**

## Cleveland Open Side Planers

To be sure of results in reducing your manufacturing costs, use **CLEVELAND OPEN SIDE PLANERS**, as over 1070 others are doing.

*Send for descriptive circular*

Box Tables; Improved Head Clamp; Power Rapid Traverse; Self Oiling Bushings throughout Drive; Counterbalanced Side Head; Single Turn Rail Clamp; Automatic Trip

to Rail Raising Mechanism. Forced Feed Lubrication to Vees if desired.



**26' to 72'**

**The Cleveland Planer Co.,** 3148 Superior Avenue,  
CLEVELAND, OHIO

*Established in 1900*

# Thor

## Electric Drills —

**They give you  
more Power!**



Because from its Spindle End to its Grip Handle the **THOR** is built of rugged, easy running parts. Many have been used for months without being touched for repairs.

And you'll find a Drill built by these **THOR** standards for any job, no matter how difficult or unusual. Select the one that fits your work from 64 different types and sizes, A. C. or D. C.  $\frac{1}{16}$  to 2-inch capacity. A ground wire—an exclusive feature—makes shocks impossible! Jacobs Chucks are regular equipment.

*Send for the Catalog today*

**Independent Pneumatic Tool Co.**  
600 W. Jackson Blvd., Chicago, Ill.



*Write us today about your work, and we may be able to save you money.*

**Biax Flexible  
Shaft Company**  
136 Liberty Street  
NEW YORK CITY

# BIAX

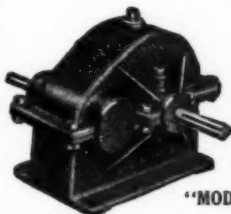
makes flexible shaft machines for drilling, boring, grinding, polishing, screw-setting, nut-setting, etc. Also special machines for—

Automobiles	Street Railways
Speedometers	Machine Shops
Woodworkers	Pattern Shops
Railroads	Welders
Boilers (Cleaning) — Foundries	
Motors	
Motor Repair Shops	

Mid-West Distributor: — Tachometer Division Elgin National Watch Co., Chicago, Illinois.

New England Distributor: — Biax Flexible Shaft Co., Worcester, Mass.

## DO BOTH!



Reduce speed  
and costs, with  
standardized  
Speed Reducers.

Get copy of  
"MODERN SPEED REDUCTION"

## BOSTON GEARS

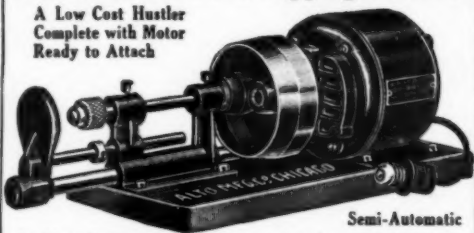
BOSTON GEAR WORKS SALES CO.

Norfolk Downs, Mass.

BOSTON NEW YORK PHILADELPHIA CLEVELAND CHICAGO

## No. 1 ALTO High Speed Motor Driven, Tapping Machine

A Low Cost Hustler  
Complete with Motor  
Ready to Attach



Semi-Automatic

*Its Main Points are—*(1) High speed, with reverse three times as fast; (2) Compact and complete, ready to attach to light socket; (3) So simple in construction that we can sell this high-grade tapper at a low price. Capacity,  $\frac{3}{16}$ " in brass,  $\frac{1}{8}$ " in steel. We also make larger motor driven Tapping Machines.

*Write for descriptive Circular and the moderate prices*

**The Alto Mfg. Co., 1647-51 Wolfram St.  
Chicago, Ill.**

## BURKE TOOLS

Sensitive Bench Drills,  
Milling Machines,  
Tapping Machines and  
Attachments.

Production on  
small parts.

Why do garage  
men use  
Burke Tools?

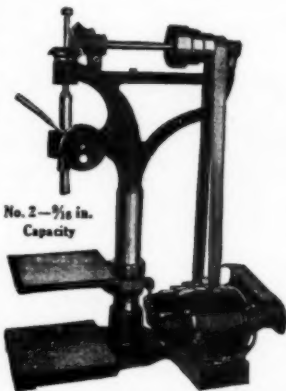
Service is  
what counts.

Send for catalog  
and price list

At your service—

**The Burke Machine  
Tool Company**

297 East 16th Street  
Cleveland, Ohio



No. 2— $\frac{9}{16}$  in.  
Capacity

## A Positive Quick-Acting Lock

### For Adjustable Quickly-Opened Dies

Instead of Clamps, Levers, Screws or Nuts that must be strained or pounded to make them hold threading dies in position.



Dies adjust for variations and open quickly for removal.

That is one great difference between the "DUPLEX" DIE STOCK for pipe and others of the same type; but there are several more points of difference and value.

THE HART MFG. CO., 2319 E. 20th St., CLEVELAND, O.

## USE the CHICAGO No. 2 POWER PIPE THREADING MACHINE



For  
Production  
and Precision  
Threading  
**PORTABLE**

Capacity:  
 $\frac{1}{4}$ " to 2" Pipe  
 $\frac{1}{2}$ " to  $1\frac{1}{2}$ " Bolt

Featuring:

1. Quick Die Change
2. Automatic Die Head
3. Three Speeds
4. Perfected Oil Control

Send for Catalog

**Chicago Pipethread  
Machine Co.**

Office and Factory: 1623 Racine St., Racine, Wis.

## Give Us A Trial

On your next order for Hollow  
Bored Forgings and Steel Shafts



When it comes to furnishing such items as *Lathe Spindles, Piston Rods, Rams, Clutch Shafts*, etc., you will find us a reliable source of supply, with dependable products, prompt deliveries and the right prices. If there's anything you need now, send along your blue-prints and we'll take good care of you. Thank you.

**American Hollow Boring Co.**  
Erie, Penna.

## Vanderbeek Universal Joints



—represent the practical refinements of 25 years experience in manufacturing Universal Joints. All parts are generous sized, fully protected against dirt, and are practically self-oiling. Exceptionally strong, they transmit full power up to 70°.

Vanderbeek Joints are in daily use on thousands of machines.

*Write today for our  
Descriptive Catalog.*

**American Tool Works, Inc.**  
Hartford, Conn., U. S. A.



**A Safety Tool  
That saves its Cost  
Every Six Months  
in Labor Alone**



**Combination  
Drill Table and Vise**

For maintenance shops and odd jobs. Write for full descriptive folder and our *Free Trial Offer*.

**MODERN MACHINE TOOL COMPANY, Jackson, Mich.**

*The*  
**IMPROVED E-Z SET  
BORING TOOL**



**Made in 3 Sizes**

Compact, Simple in construction. Positive in adjustment. Lasts indefinitely. The Shank being a separate unit, it is instantly adaptable to any machine. Illustration of M-P Three Tool Turret in last issue.

**SEND FOR CIRCULAR**

**The Maxwell Products Co.**  
Ottawa & Indiana Ave., Cleveland, Ohio

## "Bridgebilt" Factory Seating and Tool Racks

A diversified line to meet requirements of every branch of industry.

The Bridgebilt line  
will give long and  
satisfactory service

*For illustrated price list  
and discounts write—*

**The Chicago Wire  
Chair Co.**

619 No. LaSalle St., Chicago, Ill.

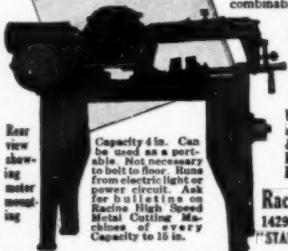
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Send for this  
**FREE  
CHART**



Rear  
view  
show-  
ing  
motor  
mount-  
ing



Capacity 4 in. Can be used as a portable. Not necessary to bolt to floor. Runs from electric light or power circuit. Ask for bulletins on Racine High Speed Metal Cutting Machines of every Capacity to 16 in.

## New Improved "RACINE" JUNIOR

**WORM GEAR DRIVE** direct from motor is now used. All gears enclosed and running in oil. New improvements in combination with old superiorities make Racine Junior absolutely free from vibration. The quietest, smoothest running as well as the fastest and most accurate metal cutting machine of its capacity.

Use "Racine" H. S. Wood and Metal Band Saw Blades & "Racine" H. S. Tungsten Power and Hand Hack Saw Blades. *Catalog H.*

**Racine Tool & Machine Co.**

1429 Junction Av., Racine, Wis.  
"STANDARD THE WORLD OVER"





## Costs so Little Saves so Much

YOU KNOW all about the annoyance, delay and loss caused by taps breaking at or below the surface of the work. And you ought to know what a big convenience and saving it is to have an inexpensive device like the

### *Walton Tap Extractor*

right at hand to remove the pieces instantler, without injury to the threads. 'Nuff sed. Sizes No. 8 to 1¼". Shipped on approval.

**The Walton Company**  
Hartford, Conn.



## Multiple Drilling On Your Single Spindle Drilling Machine—

Do your multiple drilling in *any pattern* on a single spindle drill with a

### **U. S. Multiple Spindle Drill Head**

Made regularly with 2 to 6 adjustable spindles. Special heads made to your order, with adjustable or fixed spindles.

*Let us help you make  
a worth-while saving*

**The United States Drill Head Co.,** 1952 W. Sixth St., CINCINNATI, O.  
Michigan Agents—National Sales Engineering Corp., Detroit, Mich.

## *The* BARKER GENERAL PURPOSE VISE

For Planers, Shapers, Drilling and Milling Machines



### Two Sizes

Width of jaws  $11\frac{1}{2}''$ — $12''$

Depth of jaws  $2\frac{1}{2}''$ — $3''$

Jaws open  $8''$ — $12''$

Weight 180—210 lbs.

Also 16" Mold Makers' Vise

OUR MOLD MAKERS' VISE has 13" width of jaws, 7" depth, and jaws open 16"—weight 290 lbs.

ALL BARKER VISES are made extra heavy, with steel faced jaws, and are graduated to swivel any angle. They stand lots of hard usage.

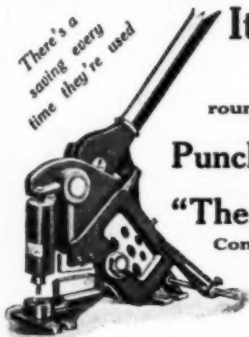
*Get in touch with us before buying*

**WM. BARKER & CO.**

Manufacturer of Machine Tools,

COVINGTON, KY.

*There's a  
saving every  
time they're used*



## It Costs Less To Cut

rounds, squares, flats  
and to

**Punch Those Holes**  
on

**"The Bench" No. 3**

Combination Shear,  
Rod Cutter & Punch

CAPACITY  $\frac{5}{8}''$

**\$45<sup>00</sup>** f. o. b.  
Phila.

**THE BENCH MACHINE TOOL CO.**

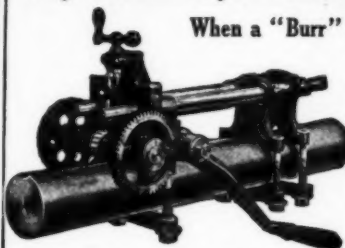
Makers of "THE BENCH" Tapping Machines

222 N. 13th Street,

Philadelphia, Pa.

## Why dismantle your shafting—

When a "Burr" is available?



This handy, portable key-seater is always ready—whether for an emergency case or routine work. Cuts accurate keyways up to 12" long anywhere, in any position, in shafts up to 5" diameter.

Operated by hand or motor. Over 10,000 already in use. Your choice of seven sizes. Why not order one now and be prepared?

**JOHN T. BURR & SON**  
422 Kent Ave., Brooklyn, N. Y.

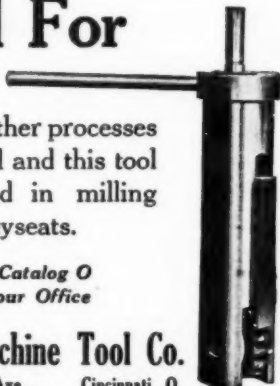
## Good For

Small  
Holes. Other processes  
have failed and this tool  
made good in milling  
internal keyseats.

*Your Catalog O  
is in our Office*

**National Machine Tool Co.**

2268 Spring Grove Ave., Cincinnati, O.





## FEDERAL DIAL INDICATORS

### E-Z THREAD DIAL

This device on your lathes will lower the cost of, and increase the efficiency of, thread cutting.

Can be attached to all size lathes.

E-Z to install.

E-Z to use.



Eliminates stopping or reversing the lathe.

Saves cost of backing belt.

Saves power to drive same.

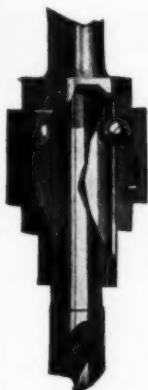
Fast growing in popularity.

A large corporation ordered nine at one time. Another five.

Sent on thirty days' trial.

Send for folder today.

**JAMES M. COLVEN, 20 Wolffe Street, Yonkers, N. Y.**



## At Last—The Perfect Drill Chuck

**With Real Quick Change  
And Broken Tang Collet**

Simply strike the end of drill, and out it comes. No hammer needed—no separate key. And it uses up drills with broken tangs.

### *The Titan Drill Chuck*

has a positive drive, operates in any position, and has been thoroly successful in every way. Made in sizes Nos. 0 to 5, for any taper shank drill, counterbore, reamer, etc. Saves time, drills and costs.

*Write for descriptive price list*

**Titan Tool Company**  
Erie, Penna.

## S. & S. 10" Vernier Caliper



Optical lap-  
ped finish of  
measuring

surfaces; open face slide, finest tool steel, glass hard. Verniers reading 1-1000" and 1-128". \$12. Ask for our *Free Trial* proposition. *Shop Agents wanted everywhere.*

## S. & S. Spring Taper Sleeves

salvage tools with  
broken tangs in-  
stantly. No fitting  
necessary. Just slip  
over defective shank and tool is ready for use again.



**SCHUCHARDT & SCHUTTE of NEW YORK**  
GEORGE SCHERR CO., 142a Liberty St., NEW YORK

## T.H.L. Front Lever Bench Punch

Malleable iron body; working parts hardened. Steel shaft and plunger. Die cannot lose alignment with punch. All parts interchangeable. Built for hardest, toughest work.

**PRICE \$45**

Extra Punches, 20 cents each; extra dies, 30 cents.

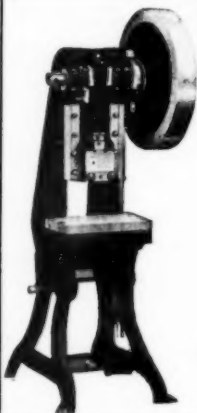
Capacity 13/32" thru 1/4" steel, 11/32" thru 5/16". Punches up to 1/2". Weight, 70 lbs.

*A good buy; can ship promptly*

**T. H. LEWTHWAITE  
MACHINE CO.**

*(Est. 1890)*

**311 E. 47th St., NEW YORK**



## Husky, Powerful

speedy Punch Presses  
deliberately designed  
for High Production  
work.

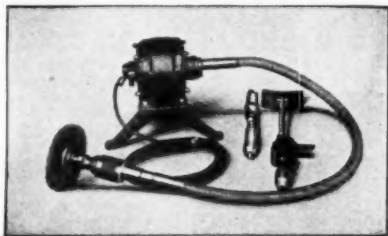
**All Types and Sizes**

*Write for Catalog*

**Rockford Iron Works**  
**Rockford, Ill.**

## The Whirlwind Buffer and Grinder

Will cut the cost on any unhandy grinding or polishing job



*Send for our latest bulletin*

**Stow Flexible Shaft Co.,** 3454 Ludlow St.,  
Philadelphia, Pa.

*The Best Since 1876*

## Sent on trial



*The Cincinnati*

**Portable Electrics  
Stay on the job.**

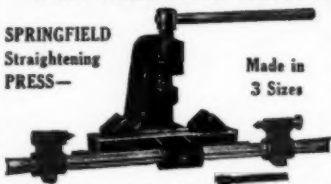
Hand and Screw Feed Drills  $\frac{1}{4}$ " to  $2\frac{1}{2}$ " cap.  
Portable Scotch Radial Drills  $1\frac{1}{4}$ " to 2" cap.  
Tool-Post Grinders.....  $\frac{1}{4}$  to 3 H. P.  
Bench and Pedestal Grinders...  $\frac{1}{4}$  to 5 H. P.  
Hand and Suspended Grinders...  $\frac{1}{4}$  to 3 H. P.  
Polishing and Buffing Lathes...  $\frac{1}{2}$  to  $7\frac{1}{2}$  H. P.

*Write for Catalog*

**The  
Cincinnati Electrical Tool Co.**  
2678 Madison Road  
Cincinnati, Ohio

## "The Acme of Convenience"

**SPRINGFIELD**  
Straightening  
PRESS—



Made in  
3 Sizes

Invaluable  
in the  
tool room,  
also for  
straightening  
crank and  
cam shafts  
and other  
automobile  
parts.

A GREAT LABOR SAVER, as you will find the arrangement of this Press makes it the very *acme of convenience*. Any work within the range of centers may be tested and straightened without unnecessary walking from press to lathe each time in straightening rough or finished work. Any length, however, may be operated upon. Of "Springfield Quality" thruout.

*Write for folder illustrating many of its uses*

**The Springfield Machine Tool Company**

633 West Southern Avenue,

SPRINGFIELD, OHIO

We also manufacture Engine Lathe and Shapers



Threading Tool



Right Hand Off-Set Side Tool



Right Hand Turning Tool

## ARMSTRONG Tool Holders

*They Save—*

High Speed Steel, 90%  
Grinding, ..... 70%  
Forging, ..... 100%

Over 100 tools for  
Lathe, Planer, Shaper,  
Slotter, etc., etc.

*Get the free Catalog*



**Armstrong Bros. Tool Co.**

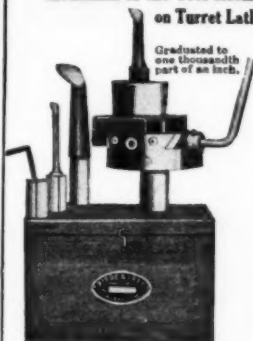
"The Tool Holder People"

308 N. Francisco Ave., Chicago, U. S. A.



## R & G Adjustable Boring Tool

Invaluable in the Tool Room and on Production Work  
on Turret Lathes, Horizontal Mills, Etc.



Graduated to  
one thousandth  
part of an inch.

It saves time and insures accuracy in boring jig plates, dies, etc., on milling machine table and drill press, that cannot be handled on the lathe. It readily trues to size holes drilled on turret lathe.

**Only \$38**

If standard taper shank is required, the price is Five Dollars extra.

Send us your order or write for complete description of this handy, time-saving outfit.

**Ribbe & Grey**  
La Porte, Ind.

Patented  
Jan. 30, 1917



## New "AUTEX" Extension Reel

**1926 Model**

Don't Forget the Swivel Joint Feature

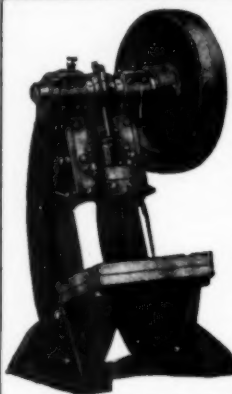
Permits of carrying the lamp  
in any direction.

**Type 8** Rapidly finding a place in large  
Industrial Plants, Machine  
Shops and Service Stations.

Now equipped with Belden Rubber Cord  
Approved by the Underwriters

Write for descriptive circular

**The Cincinnati Specialty Mfg. Co., Inc.**  
1903 Powers St., Cincinnati, Ohio



Trade **Verson** Mark

## Punch Presses

are suitable for a large variety of blanking, forming, and other press operations, and handle such light work as is often done on larger presses.

One of the features is the Automatic Safety Clutch, which is a positive prevention of accidents which are due to the repeating of presses.

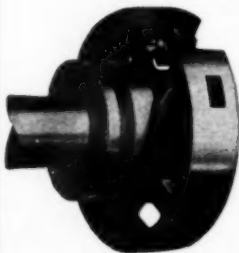
*Write for catalog*

**LaSalle Machine Wks.**  
3013 S. LaSalle St., Chicago, Ill.

*Specializing in Small Presses and Angle Shears*

## An Unusual Application?

*Use Conway Clutches!*



One of the main features of Conway Clutches is their dependability under severe strains. They are successful in applications where a clutch of lower quality would soon come to grief.

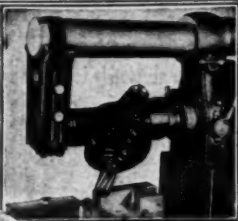
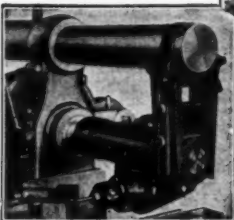
In big machines such as trench diggers, they must respond to every violent impulse of these mechanical brutes—stop, start, or deliver the extra effort of overload or sudden torque, and they always make good.

*Full data and prices on request*

**The Conway Clutch Company**  
1951 Riverside, Cincinnati, Ohio

**REDUCE** Set-ups on intricate work with the

## **New Hevy-Du-T Universal Milling Attachment**



Allows the spindle to operate at any angle in any plane. On or off any milling machine in three minutes. Write for the interesting details today.

**PORTER-CABLE**

**MACHINE CO.**

Salina St., Syracuse, N. Y.

## **Thompson Universal Grinder**

*This Improved Machine* is self-contained and motor driven, and combines efficient means for the rapid and accurate production of every grinding operation required in a machine shop.

Capacity 10"x36"

*Illustrated  
folder gives  
you full details*

**The Thompson  
Grinder Co.  
Springfield, Ohio**



# For Sure Balance--

an absolutely level and solid "Way" is necessary

## Bowsher "Balancing Ways"



are brought to an absolute level in ten seconds. No revolving parts.

The edges or "knives" upon which the work is tested are ground true, and are mounted upon the planed "ways" of a heavy bed or frame.

Standards adjustable to suit length of arbor.

Three sizes for floor—one for bench use

Send for Catalog "F"

The N. P. Bowsher Co., South Bend, Ind.

# Balancing Ways

Anderson Improved are Always Ready



Made in six sizes for balancing anything that turns on a shaft, up to 24,000 lbs.—pulleys, gin brushes, turbine rotors, crank shafts, polishing wheels, fly wheels, etc.; also for testing straightness of shafts, crankshafts, etc. No centers required; no leveling. Always ready and accurate; very sensitive.

"Swing"	20"	40"	60"	72"	96"	72"
Greatest distance bet. standards.	20"	30"	30"	66"	88"	20"
Capacity in lbs.	1000	2000	2000	5000	10000	24000
Approx. shipping weight	45	90	150	350	650	
Code	Bend	Bal	Bis	Bh	Bes	

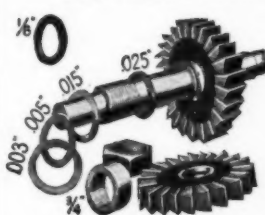
Any of above can be furnished with longer shafts

**Anderson Bros. Mfg. Co.**

1915 Kishwaukee St., Rockford, Ill.

# Steel Spacing Washers—

Made of a good grade of Cold Rolled Strip Steel, also known as Shim Steel



Stock sizes for arbors of following diameters:  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{5}{8}$ ,  $\frac{3}{4}$ ,  $1$ ,  $1\frac{1}{8}$ ,  $1\frac{1}{4}$ ,  $1\frac{3}{8}$ ,  $1\frac{1}{2}$ ,  $1\frac{5}{8}$ ,  $1\frac{3}{4}$ ,  $1\frac{7}{8}$ ,  $2$ ,  $2\frac{1}{4}$ ,  $2\frac{1}{2}$ ,  $3$ ,  $3\frac{1}{2}$  and 4 in. and larger.

Stock thicknesses: .002, .003, .004, .005, .006, .007, .008, .010, .012, .015, .020, .025, .032, .047, .063, .093 and .125 inch.

Other thicknesses up to 3.000" made to order, with keyways if so ordered.

Ask us to send samples; you'll like them

**Detroit Stamping Company**  
3443 West Fort St., Detroit, Mich.

## Save Time Setting Gang Milling Cutters

Eliminate  
Thin  
Washers



Hardened  
and  
Ground

PATENTED

"Wear-Ever" Adjustable Spacing Collars permit setting cutters to the thousandth part of an inch without removing from the arbor.

Stock sizes for  $\frac{3}{4}$ " to  $2\frac{1}{2}$ " arbors, sent on approval  
They are adjustable in 12 steps of  $\frac{2}{1000}$  inches

**SCULLY-JONES & CO. TOOL DIVISION**  
13th and Robey Streets CHICAGO, ILL.

# Winterhoff Tool and Disc Grinders

No. 2 Combination Grinder and Disc Grinder

DRILLS  
GRINDERS  
DISC GRINDERS  
SAWS  
SANDERS  
All Motor  
Driven



Price  
\$45

F. O. B. Elkhart

An ideal tool for the tool room for finishing die blocks or any flat surface discing. Equipped with 6" by 1/2" tool grinding wheel, wheel guard and tool rest, 8" disc wheel, tilting table and protractor guide, 1/4 h. p. motor 1750 r. p. m. Also made in Plain Grinder model at \$30.

Send for circulars describing these machines or see your dealer

**Winterhoff Tool & Machine Co.,** 109 South Elkhart Ave., ELKHART, IND., U.S.A.



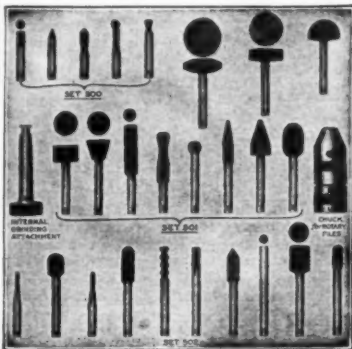
## HIGH SPEED HAND CUT ROTARY FILES

### Strand Rotary Files

Used with Strand Flexible Shaft Machines. Are giving excellent service.

Write for Catalog

N. A. Strand & Co.  
5001 N. Lincoln St.  
CHICAGO



## 14" Sensitive Drill

**Accurate—Convenient**

*You will find the U. S. a reliable, rigid tool for the rapid and economical drilling of holes  $\frac{1}{2}$ " and smaller.*

**Price with motor,  
switch and belts - \$115**

**Or with Counter-  
shaft for Belt Drive \$70**

*Built in a machine tool shop, according to the best engineering practices. Steel spindle, ground to size, with ball thrust bearing; vertical adjustment to head; tables for long and short work; three speeds. Further details gladly given upon request.*

**The U. S. Machine Tool Co.**

1952 W. 6th St., Cincinnati, Ohio



***How would  
you like—***

to tap small holes as easily as you drill them; to tap them 2 or 3 times faster than usual; to wear out the small taps you are now breaking?

The Ettco High Speed Tapping Attachment usually increases output 100%. When a Gun Tap can be used the increase is as high as 300%.

***Try one for 10 days—  
if you can then spare  
it, send it back.***

**Eastern Tube & Tool Co.**

600 Johnson Ave., Brooklyn, N. Y.

***Ettco***

**Try one  
for 10  
days**





## Why Miss This Big Economy?

*You ought to know* what a real cost reducer the "Utility" Removable Taper Shank is.

*It is designed* to be used with all straight shank tools, and represents the taper shank commonly used in solid or one-piece taper shank tools, such as drills, reamers, etc. You will find it thoroly efficient.

*Catalog and prices on request*

**The J. C. Glenzer Co.**

6469 Epworth Boulevard

DETROIT,

MICHIGAN

## Sigourney Sensitive Drills

Plain or Ball Bearing  
Belt or Motor Drive

WE MANUFACTURE sensitive drills exclusively. They are built for *service*, and in quality are unsurpassed.

SIGOURNEY DRILLS are made with one to four spindles. The illustration shows our one-spindle ball bearing drill. It has vertical adjusting head, adjustable table, three speeds, runs true and is very sensitive. *All parts are interchangeable.* Shipped belted ready for use.

*Write for circulars and prices*

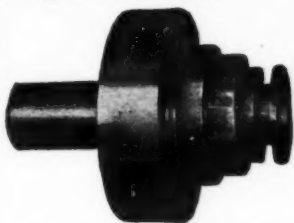
**Sigourney Tool Co.**

Hartford, Conn., U. S. A.





## Edgemont Type E Disc Clutch



### FEATURES

Single Adjustment  
Easy Operating  
Fully Enclosed  
Finished Exterior  
High Speed  
Renewable Liners  
Roller Cam Contact

A modern machine clutch to meet the trying conditions of high speed production. This clutch is built to give efficient service for the life of the machine. Easy to operate with silent, smooth action. Releases instantly at any speed.

*Complete information on request.*

**The Edgemont Machine Co.,** DAYTON,  
OHIO

## A BLESSING For Users of Bar Stock of All kinds



EVERYONE who has pipe, shafting or bar stock about his plant, should have—

### "The Handiest Racks"

—for keeping it neatly piled and properly assorted in a fourth the usual space.

PARTICULARLY valuable for keeping bar or screw machine stock at the machine when working it up into parts or small manufactured articles, saving many steps and much valuable time.

*On trial? Sure!  
Better write today*

**Wm. S. Yohe Supply Co.**  
503 Mahoning Road, N. E., Canton, Ohio

## Towsley Trucks PAY 500%

—Every Year On  
Their Cost Price!



Glad to tell  
you how

### TOWSLEY TRUCKS

repay their  
cost every  
two to three  
months.

Every style  
for every  
need.

*Write for facts and figures—you'll be glad you did*

**John T. Towsley Mfg. Co., Cincinnati,  
Ohio**

## A Big Boost for Safety!



### Safety Friction Load Brake—

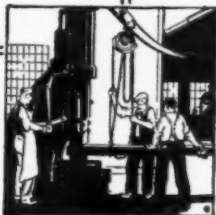
Can now be furnished at small  
extra cost on all "Canton"  
Portable Cranes, Hoists and  
Trucks, and can easily be ap-  
plied to those already in service.

This Brake complies with all  
"Safety First" laws thruout  
the country, and it positively  
holds the load at any point.  
Protects both operator and the  
work in hand.

"CANTON" CRANES are made in  
several sizes. Write for  
Booklet E-8.

**CANTON FOUNDRY & MACHINE CO., Canton, Ohio**

New York Office: 203 East 15th Street, Second Floor



*Its "backbone"  
is strong—  
and in the  
right place*



*Tribloc  $\frac{1}{4}$  to 2 tons*

**T**RIBLOC Chain Hoists afford consistent, satisfactory service under the most gruelling tests because the "backbone"—that small part hidden inside the gear case—possesses a  $3\frac{1}{2}$  to 1 factor of safety. No amount of frills will make a hoist serviceable unless this part has strength in the right place. Unstinted effort is expended to maintain this and other Tribloc parts to high standards.

We would like to tell you how and why this effort can be capitalized in your own shop. Ask us to send you Catalog 7-B.

### **FORD CHAIN BLOCK CO.**

2nd and Diamond Streets,  
Philadelphia, Pa.

---

*We also manufacture  
"THE MOTORBLOC"  
an electrically driven chain hoist*

## Lourie Hydraulic Arbor Presses

A complete line of Presses for any purpose.  
Made of any tons capacity and size.  
Either hand or power operated.



*Send for Catalog*

**LOURIE HYDRAULIC CO.**  
SPRINGFIELD, ILL.



## Atlas Arbor Presses

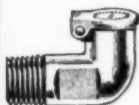
**For All Forcing Operations**

Illustration shows our  
No. 55 Power Drive  
Press, which is adapta-  
ble for fast production  
work and capable of  
supplying ten tons pres-  
sure.

*Write for our Bulletin—  
showing 30 different sizes*

**Atlas Press Co.**

*Department B,*  
Kalamazoo, Michigan



STYLE L  
20 SIZES



STYLE O  
24 SIZES



STYLE E  
13 SIZES



STYLE G  
5 SIZES



STYLE R  
21 SIZES



STYLE KV  
18 SIZES

# GITS BROS.

Standard of Comparison  
**Better Oilers**  
Quality-Schedule Delivery-Price

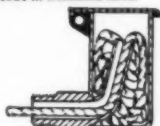
## Gravity and Wire Wick Feed Oilers

Gravity Feed—flushes the bearing.  
Wire Wick Feed—gives desired prolonged feed.

Wire Wick—replaces waste or felt.  
Made in Standard sizes.



STYLE WC  
7 SIZES



STYLE W  
8 SIZES



STYLE WT  
3 SIZES



STYLE AOR C  
11 SIZES



STYLE OG  
7 SIZES



STYLE WY  
5 SIZES

Catalog Sent on Request  
**Gits Bros. Manufacturing Co.**  
1940 S. Kilbourn Ave. Chicago, Ill.

## Faster and Better Riveting

### On a NOISELESS Machine



**Speed:** A rivet a second.

**Quality:** The heads are perfectly formed and highly polished, without hammer or tool marks. Simple adjustments give whatever degree of tightness or flexibility is desired.

**Noiseless:** The "GRANT" rolls or swedges the rivet shank. There are no blows. Therefore, it makes no nerve-racking noise.

*Write for Catalog and send us some of your most difficult work for riveting*

**The Grant Mfg. & Machine Co.**  
C. E. Station, Bridgeport, Conn.

## They Carry Away Your Money

### ON THE OILY CHIPS



DON'T let your workmen do that, when the

### Curtis Centrifugal Oil Extractor

will reclaim 90% of the original oil used, quickly paying for itself over and over again.

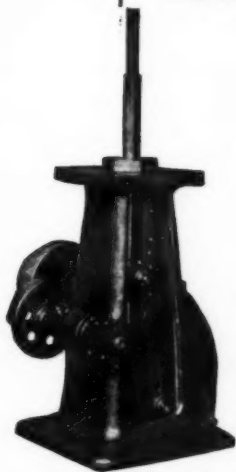
The Curtis Centrifugal Oil Extractor is made with capacities for all requirements, belt or motor drive.

*Tell us about your work and we'll submit estimate of saving*

**The Leon J. Barrett Company**  
Grafton St., Worcester, Mass.

# Lower Your Keyseating Costs

With the NEW Catlin No. 1



*Rapid  
Simple  
Durable  
Efficient  
Accurate  
Economical*

The Catlin Keyseaters are popular because they are profitable—they have made good in machine shops of every size, as well as automobile plants, government shops, navy yards and many foreign factories.

Nos. 0, 1 and 8 Keyseaters have the crank motion, while all other sizes have the rack and pinion drive.

All Catlins are thoroughly efficient, and help to lower shop costs. The picture shows our No. 1 Keyseater.

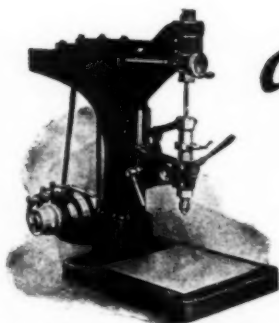
Let us send you the large folder, which gives full details of construction and operation, and also some

**Very Interesting Production Records!**

## Chattanooga Machinery Company

2401 Bennett Ave., CHATTANOOGA, TENN.

**Jacobs  
Chucks**



JACOBS CHUCK furnished as regular equipment on the Avey No. ½ Sensitive Drilling Machine.

## Ball Bearing *Avey* Sensitive

Sensitive Drills have a  
AVEY Line includes 2  
all classes of high-speed

### The Avey

This modern drill is  
bench or column type  
bearing mounting, lubri  
mended for spindle sp  
For drilling holes 3/16  
is an important factor

*For the complete*

**THE AVEY DRILLING MACHINE CO.,**

*This advertisement is p  
interests of good Drilling  
by the makers of the Jac*

**Modern tools' are a**



**Jacobs  
Chucks**

## Ball Bearing, High-Speed Sensitive Drilling Machines

Drills have a place of their own in modern shop practice. The line includes 20 types and sizes, column and bench, to handle high-speed sensitive drilling from the smallest size to 1 1/4".

### The Avey No. 1/2 Drilling Machine

This drill is made in units of one to six spindles, in either column type. It embodies the correct principles of ball bearing, lubrication, rigidity and lack of vibration. Recommended speeds up to 12000 r. p. m., but tested up to 18000. Handles 3/16" and smaller in cast iron. The Jacobs Chuck is a factor in its equipment.

For complete AVEY illustrated Catalog, write to—

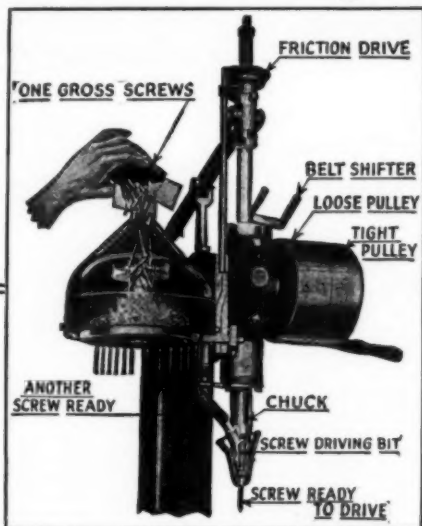
AVEY CO., : : : CINCINNATI, OHIO

*It is published in the  
Drilling Equipment  
by Jacobs Chuck*

*Drills are a modern necessity*



## A Surprising Reduction in Screw Driving Costs



Magazine Feed of the Reynolds Automatic Screw Driver

Many large users of Reynolds Magazine-Fed Automatics say they repay their cost three or four times a year.

That is because a boy or girl easily drives 800 to 1,200 screws an hour and a trained operator many more—also because the work is better.

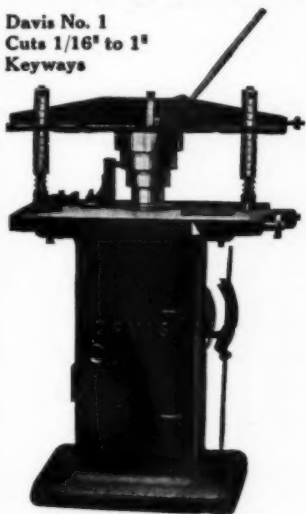
There's a Reynolds for your work. Tell us today, please, its dimensions over all, with length and gauge of screws used, and let's get down to plain facts and figures.

**The Reynolds Machine Company**  
Dept. H. H., Massillon, Ohio

# Rapid Keyseating—

## In Quantity or in Small Lots

Davis No. 1  
Cuts  $1/16"$  to  $1"$   
Keyways



Cutting Keyway in Goose Pulley

### THE DAVIS

has the  
speed for  
economical  
production  
of standard  
parts.

### THE DAVIS

can be  
set up  
quickly  
in the  
general  
shop for  
all sizes  
of keyways  
within its  
capacity.

**The Davis** is simply constructed, is difficult to get out of order, and is easy to adjust and operate. It is a rapid and economical producer of accurate keyways under all conditions.

**Write for folder**, which describes it fully, with a table of cutting time that tells its own story.

**Davis Keyseater Company**

255½ Mill St., Rochester, N. Y., U. S. A.

# Spring Press

(UNIFORM BLOW)

**Foot or Power**  
**Single and Double Action**

These new dependable Presses  
are used in large numbers by  
manufacturers of—

**Electric Devices, Toys,**  
**Jewelry, Clocks, Cutlery,**  
**Hardware, Radio Sets,**  
**Instruments, Etc.**

The Uniform Blow is a very  
special feature—it increases pro-  
duction and eliminates costly in-  
spection. Investigate.

**The Taylor & Fenn Co.**  
**Hartford, Connecticut, U. S. A.**



Drills to the center of a 10" circle.

Capacity,  $\frac{3}{8}$ " diameter.

Up and down run of spindle,  $2\frac{1}{2}$ ".

Up and down run of table, 7".

**\$44.00**

110 volt, 60 cycle, single phase.

Other voltages on application.

**Ready for the  
Job**

## **Another Original Canedy-Otto Feature**

That of first offering an electric bench drill completely equipped and ready for the job, the improved design eliminating the use of all gears and placing the cone pulley in exact alignment, enabling the belt to be run at its maximum speed. It also eliminates all twists and turns of the belt, meaning both a saving of belts and time, giving a greater speed of spindle, a feature of great advantage when using drill for small diameter.

Regular equipment consists of vertical type ball-bearing motor, toggle type switch, extension cord, socket, belting and chuck.

### **Canedy-Otto Manufacturing Company**

**Main Offices and Factory—Chicago Heights, Illinois**

**New York Branch**  
407 Broome St.

**Complete stock  
carried at branches**

**San Francisco Branch**  
955 Folsom St.



## 3 to 30 Gals. per Minute With GUSHER Pumps!

WITH A MINIMUM of power these Machine Tool Coolant Pumps operate at maximum efficiency. And they stand the wear of constant use in a way that will agreeably surprise you. They are ball bearing.

"GUSHERS" have no gears, no foot or relief valves, no packing nuts, need no priming, and are not injured by grit or small chips. Their sturdiness is noteworthy.

"GUSHER" capacities are 3 to 30 gallons per minute. Furnished with individual motors for any current, also for belt drive.

*Catalog and prices on request*

**The Ruthman Mchy. Co.**

528-534 E. Front St.  
CINCINNATI, OHIO



## "Ideal" Pump Does Just Ideal Work!

The single cylinder "Ideal" Electric Automatic Air Compressor and Exhaust Pump delivers two cubic feet of free air at 300 R. P. M. Quarter H. P. motor required for 200 lbs. pressure.

**Price, pump only, \$22.50**

← SINGLE CYLINDER

TWIN CYLINDER →

The twin cylinder pump delivers four cubic feet of free air at 300 R. P. M. Half H. P. motor required for 200 lbs. pressure.

**Price, pump only, \$32.50**

Our Pumps are used for Spray Guns, Glass Blowing and general commercial and laboratory blowing and suction purposes.

**PETRICK BROTHERS**  
2226 Belmont Ave., Chicago, Ill.





## New All Hardened Drill Chuck

To keep pace with the demands for Increased Production and Lower Maintenance Costs, Ettco Drill Chucks are now being made with All Hardened Steel Parts. They are stronger and better.



1. *Lighter in Weight.*
2. *All Hardened Parts.*
3. *Keyless.*
4. *Hand Operated.*
5. *Ball Bearing.*
6. *Continuous Grip.*
7. *Simple Construction.*

Seven good reasons for using the new Ettco.

Cash in on your old Drill Chucks. Send them to us and we will allow 15% on the exchange from the following list prices:

No. 1A	Ettco— 0 to $\frac{1}{4}$ in.....	\$ 5.50
No. 1½A	Ettco— 0 to $\frac{3}{8}$ in.....	6.00
No. 2A	Ettco— 0 to $\frac{3}{8}$ in.....	6.50
No. 3A	Ettco— 0 to $\frac{1}{2}$ in.....	9.00
No. 3½A	Ettco— $\frac{1}{8}$ to $\frac{5}{8}$ in.....	11.00

*Ettco Chucks increase the value of electric drills*

**Eastern Tube & Tool Company**  
600 Johnson Ave., Brooklyn, N. Y.



Be sure the letter

is on all of your

punches and dies. They are made in our own factory and are genuine.



*Write for Prices*

**WHITNEY  
METAL TOOL CO.**

**95 Forbes St.  
ROCKFORD, ILL.**

## **—PEERLESS— UNIVERSAL SHAPING SAW**

Modern equipment  
cuts costs

**Different Principles  
Greater Efficiency**

*Give The Most Of—*

**Speed  
Accuracy  
Blade Economy**

**SIZES:**

**6"x6"--9"x9"--13"x13"**

**PEERLESS**

**HIGH SPEED HACK-SAWS**

**6"x6" 9"x9" 13"x16"**

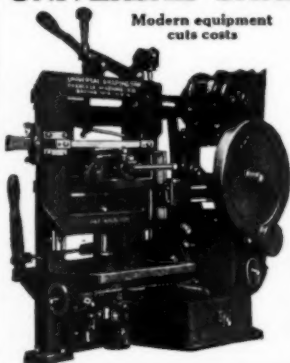
**Sturdy--Efficient--Reliable**

**Peerless Machine Co.**

**1218 Sixteenth St.**

**Racine, Wisconsin**

*Write for Details*





# Solid Tools Outclassed—

By Genesee Adjustable Hollow Mills



**THEY'RE SUPERIOR**—Because the 7 sizes cover the entire range from  $\frac{1}{8}$ " to 2", which ordinarily requires hundreds of solid tools;—because one set of blades outlasts three to five solid tools, and can then be replaced at small cost.

**THEY'RE SUPERIOR**—Because they are ideal for finishing castings, forgings, etc., and more economical than non-adjustable mills for every purpose. Genesees cut up to 15" a minute in steel. They are stronger than solid tools and cannot change in size.

**NOW MADE** in six different styles, from the heavy roughing Style "B" to the accurate finishing Style "F." We also make Style "N" Mills for all Brown & Sharpe automatics, and special sizes and styles to your order. You will find them—

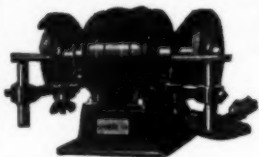
*All real cost reducers. Write us about your needs.*

**Genesee Manufacturing Co., Inc.**  
Rochester, N. Y., U. S. A.

*Manufacturers of Genesee Rapid Production Tools.*

*Est. 1908*

## Bodine Portable Electric Tool Grinders



**Have  
Eight  
Outstanding  
Advantages**

Which we want  
to tell you about.

*Equip Your Plant Throughout* with Bodine-Built Grinders, driven by Bodine-Built Motors, and there will be no excuse for robbing your production with dull tools in any department. The "Eight Outstanding Advantages" are real, for the purpose of insuring sharp tools and better production—a tremendously important consideration.

*Write for a copy of "Eight Outstanding Advantages"*

**The Bodine Electric Company**  
2244 West Ohio St., Chicago, Ill.

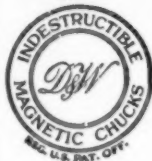
## Simple and Dependable



Construction of  
"D. & W." Demag-  
netizers is unique!

A rigid continuous  
"U" shaped core  
made of the highest  
grade laminated  
electrical steel is  
energized by two

stationary coils, thru which alternating current is passed. Construction is similar for d. c. machine, only in addition it contains a small converter.



Have you any special problems in connection with the use of Magnetic Chuck? We will gladly investigate and report on same, or design a special chuck for your particular needs. *Write us today.*

**J. & H. Electric Co.,** 161 Clifford St.,  
Providence, R. I.

# See Your Plant as Others See It

Colonel F. A. Scott wrote, "One of the finest things that could happen..... would be for each manager to go through his plant with the eyes of a stranger....."

An excellent suggestion this. Walk through your plant as a stranger. Inspect your machines with a stranger's eyes. Investigate your methods with a stranger's lack of bias.

Almost certainly you will find your walk profitable.

We think some of the profit will come from replacement of a few pieces of old equipment with modern

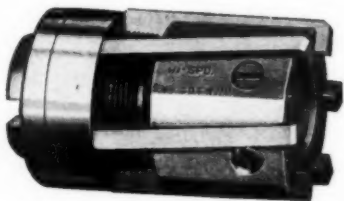
## **MACHINE TOOLS—**

**The Master Tools of Industry**

***MODERN EQUIPMENT CUTS COSTS***

**NATIONAL  
MACHINE TOOL BUILDERS'  
ASSOCIATION**

## "X-L" Adjustable Inserted Spiral Blade Shell and Machine Reamer



Reamers made with Left Hand Angle Cutting Blades do not dig in, and all chatter is eliminated. This means free, clean cutting, smooth holes, and increased production.

The range of expansion is from .100" in the smaller sizes to .150" in the larger sizes. Made with High Speed Steel Blades.

This is a real production reamer. The left hand helical flutes cut fast and clean. Made only in high speed steel. Made with straight and tapered shanks. All sizes carried in stock.



*Catalog on Request*

### The Schellenbach-Hunt Tool Co.

118 Opera Place, Cincinnati, Ohio

Agents: Gropler Bros., 105 Hudson St., New York, N. Y.  
E. E. Fletcher, 6007 Euclid Ave., Cleveland, Ohio

## Second-Hand Machinery

Lists of Second-Hand Machinery, either For Sale, Wanted or For Exchange, set in uniform style. Will be published under this heading at the rate of 50 cents a line across the page, each issue, plus \$2.50 for name and address. Minimum charge, \$5.00. No display permitted in this department.

Write directly to those offering the machines for sale for prices and full descriptions. If what you seek is not listed, use the blank enclosed to make known your wants to the publisher, who will pass them along to all Machine Tool Blue Book advertisers.

Circulation of Machine Tool Blue Book, 25,000.

### FOR SALE BY

**B. L. Saltzman,**

{ 609 W. Lake Street, Chicago, Ill.  
{ 524 W. Van Buren St., Chicago, Ill.

Bolt threader, Geometric  $\frac{1}{2}$ " to  $\frac{1}{4}$ ".  
Bolt threader, Geometric  $\frac{1}{2}$ " to  $\frac{1}{4}$ ".  
Drills, Champion 10",  $\frac{1}{2}$ " cap.  
Drills, Barnes 10".  
Drills, Silver 20".  
Drills, Cincinnati b.g., taper att., 20".  
Drills, Cincinnati dbl. b. g., 20".  
Drills, Aurora 22".  
Drills, Kokomo 24".  
Drills, Snyder 25".  
Drills, 4-spindle, 14".  
Grinders, Taylor & Fenn cylinder.  
Grinders, drill.  
Lathes, Reed 16"x5".  
Lathes, Reed 16"x6".  
Lathes, D. & W. Pond 16"x7".  
Lathes, Lodge & Shipley 16"x10".  
Lathe, Chard 18"x7", taper att.

Lathe, Hamilton 18"x8".  
Planer, Whitcomb 42"x42"x12', 2 heads on rail.  
Punch presses, Bliss, (Stiles type), No. 24.  
Punch presses, Niagara No. 5.  
Punch presses, Loshbough-J. No. 4.  
Punch presses, Milwaukee No. 5.  
Screw machines, Garvin No. 124.  
Screw machines, Bardons & Oliver No. 4.  
Screw machines, Foster No. 6.  
Screw mchs., Warner Swasey No. 6.  
Screw machines, Foster, hand.  
Screw mchs., Pratt & W., hand.  
Screw machines, Warner & Swasey, hand, Nos. 1 & 2.  
Shapers, 12", 16" & 24".

Motors and Generators—Factory Transmission.

### FOR SALE BY

**McDonald Machinery Co.,**

**1531-33 N. Broadway, St. Louis, Mo.**

Clock, electric time system.  
Demagnetizer, Walker.  
Drills, Leland-Giff'd 2-3 sp., h.s., b.b.  
Drill, Detroit 5-spindle horizontal.  
Drill, Gardam 12-spd. adjustable.  
Drills, Demco, H. & W., Kokomo 1-spd., Sipp 2-spd., h. s., b. b.  
Drills, 20", 24", 34" b.g. & tapping.  
Furnace, Holcroft 92 k.w. annealing.  
Gear hobbles, Schuchardt & S. 24".  
Gear shaper, Fellows 36".  
Grinders, P. & W. 14" vertical surface; 4 Ott 5"x18"; Landis 12"x48".  
Hack saws, 4x4. 6x6 & 6 Racine Jrs.  
Lathes, Davis 22"x10'; Bridgeford 27x9, Star 12x5, mtr.; L. & S. 16"x6".  
Pipe mche., Jarecki 6" dies & cut-off.  
Punches, Wetterhahn 18", throat  $\frac{1}{2}$ " in  $\frac{1}{4}$ "; Long & A. No. 6,  $\frac{1}{2}$ " in  $\frac{1}{4}$ ".  
Punch presses, Bliss Nos. 18 & 20; Toledo No. 1; Niagara No. 5, o.b.i.  
Rivet spinners, Grant 3/16"x $\frac{1}{4}$ ".

Milling machines, Kempsmith No. 2;  
Ohio No. 20 plain; Becker No. 6 vertical; Becker "SD" vertical, rotary table, 17200 lbs.; Cin'ti No. 3 pl.; American No. 14 univ.; B. & S. No. 1 pl.; B. & S. 14, with dividing head; Ohio 34.  
Screw machine, Gridley 1-spd. 24" auto.; Cleveland 14" auto.; P. & W. No. 24 hand; Foster No. 3 hand; Woods No. 2 tilted turret head; Bardons & Oliver No. 7; 2 Milholand, plain.  
Shapers, 15" Kelly; 16" Milwaukee; 24" Walcott; 16" Steptoe; 24" Barker; 16" Rockford; 14" Steptoe.  
Shears, 60" thrt. rotary slitting, (2).  
Tapping mche., Garvin No. 2 auto.  
Welders, 20 k. w. spot, Winfield.  
Welders, butt, Federal,  $\frac{1}{4}$ " rds.  
Wire straighteners and cutting-off machines, Adt, (2).

## SECOND-HAND MACHINERY

### FOR SALE BY

**Taylor-Hall Welding Corporation, 5 May St., Worcester, Mass.**  
WELDERS.

#### Spot and Butt Welders

We offer rebuilt and fully guaranteed spot and butt welders as listed below:

- One No. 0 Toledo butt welder, capacity  $\frac{1}{2}$ " round stock.
- One No. 2A Thomson automatic butt welder, capacity No. 8 wire, 1000 welds per hour.
- One No. 2A Thomson hand butt welder, capacity  $\frac{3}{8}$ " round stock.
- One No. 3 Toledo butt welder, capacity  $\frac{1}{2}$ " round,  $2\frac{1}{2} \times \frac{1}{2}$ " flat stock.
- One No. 10-A-6 Thomson butt welder, capacity  $\frac{1}{2}$ " round.
- One No. 20-A-10 Thomson butt welder, capacity  $1\frac{1}{2}$ " round or 2" pipe.
- One No. 7C Toledo butt welder, capacity  $\frac{1}{2}$ " round or  $2\frac{1}{2} \times \frac{1}{2}$ " flat.
- One No. 40-A-2 Thomson butt welder, capacity 2" round.
- One No. 80-A-1 Thomson butt welder, capacity  $1\frac{1}{2} \times 7$ " flat stock.
- One No. 21 Thomson automatic butt welder, capacity one thousand  $\frac{1}{4}$ " diameter wire rings, etc., per hour.
- One No. 133 Thomson spot welder, 10 k. w.
- One No. 137 Thomson spot welder, 10 k. w.
- One No. 340 Thomson spot welder, 20 k. w.

### FOR SALE BY

**Reliance Machinery Sales Company**

**1405 Brighton Road, N. S. Pittsburgh, Pa.**

- Automatic, 2" Cleveland, model A.
- Automatic,  $2\frac{1}{2} \times 3\frac{1}{2}$ " Cleveland model A
- Blower, No. 5 Champion, 64" outlet.
- Blower, Amer. pressure, 461 cu. ft.
- Boring mill, No. 44 D. & H., floor type,  $\frac{3}{4}$ " bar.
- Boring mill, Niles horiz.,  $\frac{4}{8}$ " bar.
- Boring mill, 34" Colburn, 1 head.
- Centering mch., 4" Whiton, s. h. 2-sp.
- Drill, 13" Fostick 6-spdl. m. d.
- Drill, 16" Fostick 6-spdl., m. d.
- Drill, Baush 8-spindle, No. 3 taper.
- Drill, 21" Cincinnati, sliding head.
- Drill, 24" Hoefler, sliding head.
- Drill, 36" Snyder, sliding head.
- Drill, No. 310 Baker heavy duty.
- Drill, Model "F" Turner auto. tur.
- Gear cutter, 36" x 10" G. & E., s. p. d.
- Grinder, No. 3 Brown & S. univ.
- Grinder, 12" x 30" Modern plain.
- Grinder, WPL New Yankee cap.  $2\frac{1}{2}$ ".
- Hammer, 80 lb. Bradley cush. helve.
- Lathe, 3" x 36" Jones & L., dble. sp.
- Lathe, 12" x 8" Seneca Falls.
- Lathe, 12" x 10" Davis tool r'm, q. c. g.
- Lathe, 14" x 6" Hendey, g. h., m. d.
- Lathe, 14" x 6" Seneca Falls, q. c. g.
- Lathe, 14" x 8" Whitcomb-Blaisdell.
- Lathe, 16" x 8" Bradford, q. c. g.
- Lathe, 17" x 8" Sidney, hvy. duty, q. c. g.
- Lathe, 18" x 8" L. & S., q. c. g., m. d.
- Lathe, 18x10 Whitcomb-B. g. h., s. p. d.
- Lathe, 24x10 Whitcomb-B. g. h., m. d.
- Lathe, 24" x 2" American, g. h., m. d.
- Lathe, 26" x 12" Bridgeford hvy. duty.
- Lathe, 27" x 26" Schumacher-B., q. c. g.
- Lathe, 30" x 12" Johnson, triple grd.
- Lathe, 34" x 12" LeBlond, triple grd.
- Lathe, 42" x 31" Pond, triple geared.
- Miller, No. 1 Knight drill.
- Miller, No. 14 American plain.
- Miller, No. 2 Cincinnati, plain, v. a.
- Miller, No. 2 Brown & S. universal.
- Miller, model "C" Becker, vert.
- Millers, Sellers, Lincoln type, (2).
- Miller, model "H" Becker mfg. type.
- Pipe machine, B. & K.,  $\frac{1}{2}$ " to 2" m. d.
- Pipe machine, 8" Cox, cap.  $2\frac{1}{2}$ " to 8".
- Pipe machine, Merrill,  $2\frac{1}{2}$ " to 12".
- Planer, 60" x 60" x 16' Betts, 3 heads.
- Press, 15-ton Lucas forcing.
- Press, 30-ton Lucas forcing.
- Press, No. 19 Bliss, o. b. i., 2" str.
- Press, No. 5-A Willard, o. b. i., 2" str.
- Press, No. 87 Niagara, screw.
- Presses, Nos. 61 & 62 Bliss, o. b. i., f. w.
- Press, Ferracute DD2, o. b. i., cam.
- Press, No. 10 Bliss, reducing, 4" str.
- Press, No. 784 Bliss straight sided.
- Press, No. 305 Bliss geared, 8" str.
- Press, No. 14 Bliss toggle drawing.
- Presses, No. 54 Toledo trimming.
- Punch, Royersford d. e., cap.  $1\frac{1}{2}$ " x 1", arch. jaw, 18" throat.
- Punch, EF Cleveland, 48" thrt., m. d.
- Punch, Wickes, 48" thrt., cap.  $1\frac{1}{2}$ " x 1".
- Radial drills, 4' & 5' Prentice plain.
- Radial drill, 5' American plain, t. a., motor drive.
- Radial drill, 5' Bickford, s. p. d.
- Radial drill, 6' American pl., belt dr.
- Reduction gear, Foote, 50 to 1.
- Saw, American metal swing, m. d.
- Screw mch., No. 4 W. & S., g. f. hd.
- Shaper, 20" Steptoe b. g. crank.
- Shaper, 24" Cincinnati b. g. crank.

Our warehouse is full of bargains. What have you for sale?

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Strong, Carlisle & Hammond Co., Cleveland, O., Detroit, Mich.**

#### ENGINE LATHES.

14"x 6' LeBlond, l. c. g. and chuck.  
14"x 6' Hamilton.  
14"x 6' American, c. r. and t. a.  
14"x 6' Porter, compound rest and taper attachment, l. c. g.  
16"x 8' Monarch, c. r., stand. pattern.  
16"x 8' South Bend, compound rest, complete.  
16"x 8' Lodge & Shipley, old style, compound rest, q. c. g.

18"x 8' Prentice c. r., l. c. g., chuck.  
18"x 8' American, 8-step cone, s. b. g., q. c. g.  
18"x 8' Schumacher-Boye & Emmes, c. r., 8 step cone, s. b. g., q. c. g.  
18"x 10' Star, 4-s. c., s. g., with 16" 4-jaw ind. chuck.  
24"x 12' Lodge & Shipley, patent hd. compound rest, q. c. g., arranged for constant speed motor drive.

#### TURRET LATHES AND SCREW MACHINES.

No. 2-A W. & S. g. h. tur. lathes.  
No. 4 W. & S. g. f. h. universal turret screw machine.  
26" Gisholt heavy duty turret lathe.  
2"x24" Jones & L. g. h. flat turret.  
No. 00 Brown & Sharpe auto., (3).  
No. 0 Brown & Sharpe auto. (2).  
No. 4 Warner & Swasey, p. h., a. c. and b. f.  
No. 2 Warner & Swasey, p. h., a. c. and b. f.  
No. 4 Warner & S., g. f. h., a. c. and b. f.

No. 3 Foster g. f. h. turret screw mch., with p. f. carriage and turret.  
No. 55 Nat'l Acme 4-spl. auto., (3).  
24" Cleveland model "A" auto. screw mch., with 5-hole turret.  
18" Cleveland model "A" auto. screw mch., with 5-hole turret.  
18" Libby, factory rebuilt.  
No. 2-G Brown & Sharpe automatics (2).  
No. 2 Brown & Sharpe turret forming (2).

#### DRILLING MACHINES.

22½" Cincinnati, sliding head, friction back geared, power feed.  
24" W. F. & J. Barnes, sliding head, back geared and power feed.  
26" Aurora, slid. hd., b. g. and p. f.  
24" Baker heavy duty.  
3" arm Fosdick & Holloway plain radial, with t. a.

7" No. 1 Allen sgl. spld. ball b., (3).  
14" 4-spindle Leland & Co. h. s., b. b. (2).  
14" 3-spindle Henry & Wright, h. s., b. b.  
14" 4-spindle Henry & Wright, h. s., b. b.

#### MILLING MACHINES.

No. 0 Bickett, hand, bench type (3).  
Toledo hand milling machines.  
No. 13-B B. & S. mfg. type, (1).  
No. 1-B K. & T. "Milwaukee" plain, constant speed drive.

No. 1 Brown & Sharpe vertical.  
No. 22 Garvin vertical, with circular milling attachment.  
No. 1-Y Brown & Sharpe plain.

#### GRINDERS.

No. 1 Brown & Sharpe universal.  
No. 3 Brown & Sharpe universal.  
No. 2 Brown & Sharpe surface, (2).  
No. 10 Brown & Sharpe plain.  
No. 6-A Bryant internal.

No. 1 LeBlond cutter grinder.  
Type "DE" Hisey-Wolf internal.  
No. 11 Brown & Sharpe pl. grinders.  
Plain emery wh'l stand with column.

#### SHAPERS AND PLANERS.

20" Smith & Mills crank.

22"x22"x 5 Putnam planers (2).

#### METAL CUTTING TOOLS AND SQUARING SHEARS.

Higley cold saw.

No. 6 Cockrane-Bly.

#### GEAR CUTTERS AND HOBBER.

26" & 36" No. 2 Brown & Sharpe automatic.  
No. 13 Brown & Sharpe automatic.

No. 18 Gould & Eberhardt vertical, for spur & spiral.  
No. 12 Brown & Sharpe, bevel.

#### MISCELLANEOUS.

Boring mill, 54" Bullard vertical, 2 swivel hds., rapid traverse, arranged for belted motor drive.  
Hammer, Quickwork body hammer.

Centering machines, single spindle Cadillac, (2).  
Cock grinder, 4-spindle No. 2 Turner automatic.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Cincinnati Machinery & Supply Co., 215 E. Pearl St., Cincinnati, O.**

Machine Tools Worth Investigating.

Bolt cutter, 14" Landis double spindle, with lead screws.  
 Bolt cutter, 1" Landis double spindle.  
 Disc grinder, No. 21 Besly 36", complete, with tables and press.  
 Forcing press, 30-ton Lucas.  
 Gear hobber, 18-H Gould & Eberhardt.  
 Lathe, 28x48 McCabe double spindle screw cutting.  
 Press, No. 8A Rockford straight side, 100 tons.  
 Radial drill, 7' American, gear box, s. p. d.  
 Radial drill, 5' American, gear box, s. p. d.  
 Shear, No. 272 Niagara power squaring, 72", 14 gauge and lighter.  
 Surface grinder, No. 2 Brown & Sharpe.  
 Surfacing machine, No. 4 Peerless.

Plenty of others in stock; write for circular.

### FOR SALE BY

**Wm. C. Johnson & Sons Machinery Co.,**

**1211-1223 N. 12th St.,**

**St. Louis, Mo.**

#### MILLING MACHINES

No. 14 Rockford plain.  
 No. 14 Brown & Sharpe.  
 No. 1 Knight vertical.  
 No. 3 Oesterlein plain.

No. 3 Cincinnati plain.  
 No. 12 Kempamith.  
 No. 25 Becker.

#### LATHES.

44"x24' Pond, triple geared.  
 32"x16' F. E. Reed.  
 26"x16' Whitcomb-Blaisdell.  
 26"x12' Bridgeford.  
 26"x12' Putnam.

20"x10' Rahn & Mayer.  
 17"x 7' Oliver heavy duty.  
 15"x 7' Carroll-Jamieson.  
 15"x 6' Monarch, q. c. g.

#### PLANERS.

48"x48"x14' Gray, 2 heads.  
 42"x42"x16' Powell, 3 heads.  
 36"x36"x10' Flather, 2 heads.

32"x32"x10' Cincinnati, 3 heads.  
 24"x24"x 6' Powell.

#### DRILLS.

4-spindle Allen.  
 4-spindle Henry & Wright.  
 5' arm Pond radial.  
 20" Champion.

22" W. F. & John Barnes.  
 24" Aurora, sliding head.  
 3' Canedy-Otto post drill.

#### GRINDERS.

Washburn twist drill grinder.  
 8" Heald rotary, magnetic chuck.  
 No. 16 Brown & Sharpe plain.  
 No. 50 Gardner, disc.  
 No. 4 Brown & Sharpe universal.

No. 60 Heald, cylinder.  
 20"x34" Diamond face.  
 No. 1 Fraser surface.  
 5"x18" Ott.  
 Schmidt auto, cylinder.

#### PRECISION TOOLS.

No. 3 —7" swing Stark bench lathes.  
 No. 4 —9" swing Stark bench lathes.

No. 4 Langelier swaging machine.  
 No. 1 Dayton swaging machine.

#### MISCELLANEOUS.

Acetylene generator, 100 cu. ft. cap.  
 Air compressors, (12).  
 Belt lacer, Peerless.  
 Boring mche., hor., No. 2 P. & H.  
 Boring mill, 42" Bullard.  
 Buffing lathe, 5 h. p. Reliance,  
 motor driven, 3 ph., 60 cy., 220 v.  
 Bulldozer, 75-ton Lorie hydraulic.  
 Gear hobber, 54" Schuchardt & S.  
 Gear hobber, No. 1 Schuchardt & S.  
 Gear hobber, No. 1 Farwell-Adams.  
 Hammer, No. 2-A High Speed.  
 Keyseater, No. 2 Mitts & Merrill.

Post hammer, Pettingell.  
 Punch, No. 5 Long & A., 5" throat.  
 Punch, No. 7 Long & A., 4" throat.  
 Punch and shear, 4 in 1.  
 Riveter, Shuster, model A, 2".  
 Screw machine, 3"x36" Jones & L.  
 Screw machine, 2"x24" Jones & L.  
 Screw mche., No. 14 Smurr & Kamen.  
 Screw machines, 1" Pratt & W.  
 Sq. shear, 62", 18" gap, No. 10 ga.  
 Tapping machine, No. 1 Garvin.  
 Tilted turret lathes, Nos. 2, 3 & 4.  
 Turret machine, 24" Greenlee.



## SECOND-HAND MACHINERY

### FOR SALE BY

**A. D. White Machinery Co., 108-114 N. Jefferson St., Chicago, Ill.**

#### BORING MILLS.

- |                                      |                                    |
|--------------------------------------|------------------------------------|
| 10' Pond mill, 2 heads, motor drive. | 30" Bullard, 1 swivel turret head. |
| 6' Pond, 2 heads, motor drive.       | 24" bar Binsse horizontal mill.    |
| 36" Niles, 2 heads, belt drive.      |                                    |

#### DRILL PRESSES.

- |                                     |   |
|-------------------------------------|---|
| 12" Leland-Gifford ball bearing.    | 24" Barnes all geared, 2-spindle.               |
| No. 2 Avey ball bearing.            | 36" American sensitive radial drill.            |
| 36" Cincinnati, tapping attachment. | 36" Cincinnati Bickford radial, gear box.       |
| 36" Aurora, b. g., sliding head.    | 42" American Tool Works plain radial, gear box. |
| 28" Hamilton, b. g., sliding head.  | No. 2 Foote-Burt gang, 4-spindle                |
| 28" Aurora, b. g., sliding head.    |   |
| 24" Cincinnati, comp. table.        |   |
| 20" Barnes, b. g., tapping attach.  |   |

#### GRINDERS.

- |                                     |                                       |
|-------------------------------------|---------------------------------------|
| 6"x32" Norton, excellent condition. | No. 24 Bath universal grinder.        |
| 14"x72" Norton, rebuilt.            | Pratt & Whitney vertical surface.     |
| 16"x48" Landis crank pin.           | No. 34 Van Norman auto. ball race.    |
| 16"x36" Landis plain.               | 18" disc grinder, pl. & univ. tables. |
| No. 85 Heald internal, (2).         | Several tool and cutter grinders.     |

#### MILLING MACHINES.

- |  |                                   |
|--|-----------------------------------|
| No. 3H LeBlond, vertical attach.                                 | No. 34 Pratt & Whitney duplex.    |
| No. 3 Kempsmith pl., excell't cond.                              | No. 3 Cincinnati high power vert. |
| No. 3 Cincinnati plain, rebuilt.                                 | No. 5B Becker vertical.           |
| No. 2 Cincinnati plain, rebuilt.                                 | No. 6 Becker vertical, 60" feed.  |
| No. 20 Ohio plain, rebuilt.                                      | No. 25 Becker plain (3).          |
| No. 1 Newton slab, 65" table feed.                               | No. 0 Rockford.                   |
| Nos. 2B and 2B heavy Brown & Sharpe, single pulley drive, plain. | No. 3 Pratt & Whitney die sinker. |
|  | No. 6 Whitney hand (3).           |

#### LATHES.

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 14"x 6' Whitcomb-Blaisdell, c. rest. | 20"x10' American geared hd., q. c.    |
| 18"x 7' Chard dbl. b. g., rebuilt.   | 22"x10' Davis dbl. b. g., quick chge. |
| 20"x 8' Lodge & Shipley, grd. hd.    | 34"x10' Putnam heavy lathe.           |
| 20"x 8' Hamilton, dbl. b. g.         | 38"x14' Fifield, rebuilt.             |

#### PRESSES.

- |  |  |
|--|--|
| No. 32 Michigan, solid back.                       | No. 55 Adriance dbl. crank, 2" str.                  |
| No. 664 Toledo embossing press, 1000 ton pressure. | No. 1694 Toledo toggle drawing press, used 8 months. |

#### SCREW MACHINES.

- |   |   |
|---|---|
| 1-3/4" Cleveland auto., serial 30000, double cross slides, (5). | Kent Owen hand, 14" cap.                                  |
| 2" Cleveland auto., serial 26302.                               | 1" Hartford auto., cheap.                                 |
| No. 1 Garvin hand, 1/2" cap.                                    | 1" Cleveland auto., cheap.                                |
| No. 3 Superior hand, 1 5/16" cap.                               | 14"x18" Pratt & Whitney hand, with quantity of equipment. |
| No. 4 Milholland hand, 1 1/2" cap.                              | No. 6 Foster, pr. feed turret (2).                        |

#### TURRET LATHES.

- |   |                                      |
|---|--------------------------------------|
| 3"x36" Jones & Lamson.                                  | No. 3 Warner & Swasey Fox lathe.     |
| 21" Gisholt, late type.                                 | 16" Drees Fox lathe.                 |
| 24" Gisholt, 64" hole in spindle.                       | 18" Amer. Tool & Mch. Co. Fox lathe. |
| 20" Fay & Scott universal turret.                       | 22" Reed turret lathe.               |
| No. 3 Pratt & Whitney turret lathe, 3" hole in spindle. | 54"x10" Potter & Johnston.           |

#### MISCELLANEOUS.

- |                                     |   |
|-------------------------------------|---|
| Bolt cutters, 2", 3 1/2", 4".       | Planer, 58"x56"x14" Gorton, rev. motor, 4 heads, new. |
| Gear shapers, No. 6 Fellows.        | Shaper, 16" Gould & Eberhardt, b.g.                   |
| Hammer, 80 lb. Bradley, helve.      | Shear, No. 16A Niagara, ring & circle.                |
| Hammer, 150 lb. drop.               | Surface plate, 24"x48".                               |
| Pipe machine, 4" Saunders.          | Thread roller, No. 119 Bess, screw c.                 |
| Planer, 30"x8" Ohio, heavy pattern. |   |
| Planer, 36"x36"x15" Betts, 2 heads. |   |

Send for latest list.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### Severin-Tripp Machinery Co.,

Bending roll.  
Boring mill, 53" Niles.  
Boring mill, 72" Niles, m. d.  
Brake, 8" Ohl, 15 gauge.  
Crane, 5-ton, 45' span, 140' runway.  
Crane, 82' span, 170' runway.  
Gear cutter, 36x9 Gould & Eberhardt.  
Grinder, knife, 120".  
Hammers, Nos. 3 & 4 Nazel.  
Lathe, 16" x 5' Monarch, b. d.  
Lathe, 18" x 6' Champion.  
Lathe, 24" x 12' Prentice, geared hd.  
Lathe, 30" x 12' American.  
Lathe, 35" x 12' Bridgeford.  
Lathe, 42" x 22' Bridgeford.  
Lathe, 60" x 34' American.  
Lathe, gap, 18" x 36" x 10' Putnam.

#### 25 Church St., New York, N. Y.

Lathe, gap, 18" x 36" x 8' Fay & Scott.  
Pipe machines, 6 & 8 Saunders.  
Pipe machines, 4" Bignall & Keeler.  
Planer, 36" x 16' Pond, m. d., d. c.  
Planer, 36" x 36" x 26' Pond.  
Planer, 42" x 42" x 26' Pond.  
Planer, 72" x 72" x 30' Sellers, b. d.  
Punches, No. 4 Hilles & Jones,  
48" throat, (2).  
Punch, No. 4 Hilles & J., dbl. end.  
Radial drill, 30" Gang.  
Riveter, Allen.  
Riveters, Hanna, (3).  
Rotary planer, Cleveland.  
Shear, No. 60 Quickwork.  
Straightening rolls.  
Turret lathes, 21" Gisholt, (2).

### FOR SALE BY

#### Brownell Machinery Co.,

#### 150 Pine St., Providence, R. I.

#### BORING MILLS.

24" Bullard rapid production vertical.  
No. 1 1/2 Beaman & Smith horiz. drilling, tapping, boring and milling mche., 34".

#### GEAR CUTTERS

No. 3 Brown & Sharpe, spur, 26x8.  
No. 4 Brown & Sharpe spur, 36x9,  
flywheel on cutter arbor.

#### GRINDERS.

10x96 Norton plain.  
No. 11 B. & S. plain, 4x30.  
No. 1 Norton tool & cutter.  
No. 2 Norton tool & cutter.

#### HACK SAWS.

No. 7-K Atkins 8x8.  
13"x16" Peerless high speed.

#### LATHES.

30"x20" Fitchburg.  
20"x12" Reed.  
20"x16" Beaman & Smith.

#### MILLING MACHINES.

No. 2 heavy B. & S. plain.  
No. 3 B. & S. plain.  
No. 2 B. & S. plain.  
No. 1 1/2 Brown & Sharpe universal.

#### PLANERS.

48"x72"x20" Gray, 4 heads.  
30"x30"x6" Detrick & Harvey open  
side.

#### SCREW MACHINES.

No. 6 B. & S. geared friction head.  
No. 4 B. & S. plain head, wire feed.  
No. 2-F B. & S. hand, constant spd.

#### MISCELLANEOUS.

Adjustable hand reamers, new Taft-  
Peirce, at 40/50% discount.  
Broaching mche., No. 2 Lapointe.  
Drill, upright, 25" Weigel slid. hd.  
Radial drill, 5' Prentice Bros., s. p. d.  
Radial drill, 4' Prentice Bros., s. p. d.

#### MAGNETIC CHUCKS

50—Brand new Taft-Peirce Simmons Rectangular Magnetic Chucks 8x10,  
for 110 v., d. c., suitable for No. 2 surface grinders.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### Marr-Galbreath Machinery Co.,

Air compressor 4"x5" Caldwell, 2 cyl.  
Angle & bar bender, No. 9 Buffalo.  
Angle rolls, K. & R., 6x6x1/2".  
Arbor presses, Nos. 00 & 1 Atlas (5).  
Blowers, pos. pressure, 5" outlet.  
Bolt cutters, 1 1/2", 1 3/4", 2", 3" & 4".  
Bolt cutter, 1 1/2" Reliance, dbl. head.  
Bolt cutter, 1 3/4" Acme, 3-spindle.  
Bolt cutter, 2" Landis, 1-spindle.  
Boring mills, 96" Pond, 2 heads.  
Boring mill, 42" Colburn 2 hds., mtr.  
Boring mills, Rockford, 2" & 3" bar.  
Brake, 4' D. & K., "steel", hand.  
Brake, 8"x20 ga. Robinson, hand.  
Brake or press, 10' Robinson, toggle.  
Bulldozers, Nos. 1, 4, 5 & 7 W. W.  
Bulldozer, No. 7 Ajax.  
Comp'r, 2500 cu. ft. L. D. G., a. c. mtr.  
Crane, 40-ton Morgan, 67' span, 4  
motors, 220 volts, d. c., new.  
Cutting-off mch., 6' Newton, int. m. d.  
Drill, radial, 3' Prentice, t. a., m. d.  
Drill, radial, 4' American, gear box.  
Drills, radial, 4' & 5' Bickford.  
Drill, 8-sp. Bausch, rd. hd., belted.  
Drill, heavy gang, 4-sp., 12' table.  
Drill, 20" Silver, b. g., fig. 62.  
Drill, 22" Aurora upright.  
Drill, 24" Aurora, sliding head.  
Drill, 24" Barnes, b. g.  
Drill, 30" Barnes, sliding hd., b. g.  
Exhausters, No. 8 Buffalo.  
Forging mch., 1 1/2" Acme, iron bed.  
Forging machine, 3" Acme, steel bed.  
Gear cutter, No. 11 universal Dwight.  
Gear cutter, No. 3 S. & C., auto. 1x1".  
Gear hobber, No. 4 Farwell, A-1.  
Generator, 100 k. w., 240 v., d. c., connected to horiz. steam engine.  
Gen'r, 500 k. w., 3/60/2300 to turbine.  
Generator, 85 k. w., 240 v., d. c., connected to horiz. steam engine.  
Grinder, No. 60 Heald internal.  
Grinders, No. 1 Cincinnati universal, cutter and tool.  
Grinder, 20" Taylor & Fenn, wet tool.  
Grinder, Yankee drill, style A.  
Hammer, 100 lb., single fr., steam.  
Hammer, 2000 lb. Erie, single frame.  
Hammers, 40, 80, 100 lbs. Bradley.  
Hammer, 125 lb. Bradley upr. strap.  
Hoist, pneumatic, Curtis.  
Keyseater, 24" Morton, cap. 2 1/2".  
Lathe, 42"x32" Am., grd. hd., m. d.  
Lathe, 38"x16" New Haven, rag. blks.  
Lathe, 24"x10" Pgh., q. c. g., t. a.  
Lathe, 24"x10" S. & B., q. c. g., t. a.  
Lathe, 20"x10" Rahn-L., q. c. g., t. a.  
Lathe, 18"x12" L. & S., q. c. g., t. a.  
Lathe, 18"x8" Lodge-S., g. h., pan.  
Lathe, 16"x8" Bradford, pl. change.  
Lathe, 16"x6" Plather, taper att., ch.  
Lathe, 15"x6" South Bend.  
Lathe, 14"x6" Monarch, plain change.  
Lathe, 12"x5" Reed-P., g. h., s. p. d.

#### 58 Water St., Pittsburgh, Pa.

Lathe, 13"x6" South Bend, m. d.  
Lathe, speed, 11"x4" Prentiss, t-rest.  
Miller, No. 3 1/2 Fox, hand, 24"x6"x14 1/2".  
Miller, No. 0 1/2 Cin. pl., 18"x6"x15".  
Miller, No. 3 Leblond, pl. ind. hd.  
Miller, Hendey Lincoln No. 2 1/2.  
Miller, Knight duplex, tbl. 8 1/2"x32".  
Miller, No. 0 Kempsmith universal.  
Miller, vertical No. 0 & 1 Bickett.  
Miller, vertical, Becker "C".  
Miller, bench, No. 3 Burke.  
Millers, hand, Whitney, (2).  
Motors, 3 1/2 h. p., 220 volts, d. c., 450/1800 rev., (2).  
Motor, 2 h. p., 1/60/110/1200.  
Pipe machines, 8", 6", 2" Oster.  
Pipe machine, 6" Jarecki, s. p. d.  
Planer, o. s., 72"x72"x16", 3 hds., m. d.  
Planer, 48"x48"x10" Pond, 2 hds.  
Planer, openside 42"x42"x16", 3 hds.  
Planer, Powell, 42"x42"x16", 4 hds.  
Planer, 24"x24"x5" New H., 1 hd.  
Press, No. 1 Toledo, o. b. i., for mtr.  
Press, No. 2 V. K. & V., 2300 lbs.  
Press, 7 1/2" Bliss, 12" stroke, tie rod.  
Press, No. 10 Bliss o. b. i., bench.  
Press, No. 11 Perkins, pl. trim., 4" str.  
Press, No. 59 Toledo, side shear.  
Press, No. 82 Consolidated horning.  
Presses, foot, kick, (6).  
Punch, No. 124-A Niagara, 15"x1", 1 1/2".  
Punch & shear, No. 51 Beloit.  
Punch & shear, No. 2 Long & Allstatter, 30" throat, a. j.  
Punch & shear, 14" & 72" throat.  
Riveter, 4" Shuster, style A.  
Riveter, 80-A Grant, cap. 1/2".  
Riveter, Allen, jaw. 36x20x1 1/2" rivets.  
Riveters, 5-A High Speed.  
Saw, Burke, 12" blade.  
Saw, cold, No. 18 Wagner, 16" saw.  
Saw, cold, No. 11 1/2 Higley, 14" saw.  
Screw machine, No. 2 P. & S., p. f.  
Shaper, 24" Stockbridge, rebuilt.  
Shapers, 24" G. & E. old style, good.  
Shaper, 16" Cincinnati, b. g. crank.  
Shear, single end, 9" throat, cap. 3 1/2" round, motor drive, new.  
Shear, Quickwork, Nos. 3 & 6 m. d.  
Shear, Niagara 16-A ring & circle.  
Shear, rotary, 4" Lennox, 8' gap.  
Shear, square, 10"x10 ga., m. d.  
Shear, squaring, 30" P. S. & W., foot.  
Straightener, No. 2 Kane & Roach.  
Testing mchs., 100,000, 200,000 lbs.  
Tumbler barrel, Globe, 18"x15", new.  
Turret, 24" Gisholt, 6 1/2" h. s., t. a.  
Turret, vert. 30" Bullard & Colburn.  
Turret lathe, 2x24" J. & L.  
Turret lathe, No. 1 Bardons & O.  
Turret lathe, 28" Gisholt, t. a.  
Turret lathe, 18" B. & O., fr. hd.  
Turret lathe, P. & W. bench.  
Upsetter, 8" Acme, steel bed, A-1.  
Valve tapper, 4" Pottstown, 3-w., m. d.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Botwinik Brothers, Inc.,** 67 Water St., New Haven, Conn.

#### DRILL PRESSES.

15—Myers 10" bench sensitive drill presses, with chucks, brand new. Price \$25 00 each, net, f. o. b. New Haven, Conn.

Wire, write or phone.

### FOR SALE BY

**Clark Machinery Co.,** 1235 St. Clair Ave., **Cleveland, O.**

The following are bargains in every sense of the word:

Grinders, Pratt & Whitney 6"x48" plain cylindrical, (2), each.....	\$ 350.
Lathe, 16"x8' Walcott q. c. g. engine lathe, with double back gears and power feed to turret on bed.....	450.
Milling machine, Cincinnati 18" automatic.....	300.
Milling machines, Brown & Sharpe No. 12 plain, with pump, (4), each	125.
Milling mches., Kempsmith No. 32 manufacturing, with pump, (3) each	125.
Milling machines, Hendey manufacturing, with pump, (5), each.....	125.
Press, No. 6 Bliss inclinable double acting cam draw press, geared.....	450.
Screw machines, Foster No. 6, with power feed to turret and power feed to cut-off and bar feed, (4), each.....	500.

### FOR SALE BY

**The O'Brien Machinery Co.,** 113 N. Third St., **Philadelphia, Pa.**

Boring machine, 36" Bullard, turret head, vertical.

Die sinker, No. 2 Pratt & Whitney.

Die sinker, No. 3 Pratt & Whitney.

Die sinker, No. 4 Pratt & Whitney.

Drill, 32" Aurora, motor driven, tapping attachment.

Drill, 28" Cincinnati Bickford, geared box drive.

Drill press, D-1 Colburn heavy duty.

Grinders, foundry, Norton heavy duty, (2).

Hammer, 4000 lbs. Chambersburg steam drop.

Hammer, 2500 lbs. Chambersburg steam drop.

Hammer, 2000 lbs. Chambersburg, double frame, steam.

Hammer, 1000 lbs. Chambersburg steam drop.

Hammer, 600 lbs. Cham'burg st. d.

Hammer, 1500 lbs. Erie sgl. frame st.

Hammer, 1000 lbs. Niles-Bement-Pond, double frame.

Hammer, 1000 lbs. Billings & Spencer board drop.

Hammer, Bement-Miles, 300 lbs.

Lathe, 22"x11' Lehmann, geared head, taper attachment.

Lathe, 24"x10' American, taper att.

Lathe, 30"x30' Pond.

Lathe, 30"x30' Harrington.

Lathe, 20/40"x10' Rahn-Larmon extension bed gap.

Milling machine, Newton combination circular milling machine and saw for structural work.

Milling machine, No. 3 Becker univ.

Lathe, 27"x10' LeBlond, with turret attachment.

Milling mche., No. 4B Becker vert.

Pipe machines, 2", 4", 6", 8" & 12"

Oster, Cox, Williams, Eaton-Cole

& Burnham and Jarecki makes,

belt or motor driven, comp. stock.

Planer, 36"x36"x12" Woodward &

Powell, motor driven, 3 heads.

Planer, 36"x36"x24" Bement, 4 hds.

Press, No. 54 Toledo gr. str. side.

Press, No. 73 Bliss trimming press,

with side shear.

Presses, Nos. 18, 19 and 20 Bliss,

Press, Chambersburg motor driven

trimming.

Punch and shear, No. 3 Hilles & J.,

dbl. end, motor dr.; punch end,

42" thrt., cap. 1 1/2" thru 1"; shearing

end, 36" thrt., cap. 1" plate, 2 1/2"

round, 7"x1 1/2" flat, 5"x5"x1" angle.

Punch and shear, Pels combination;

punching, cap. 1" thick; shearing,

2" rd., 2 1/2" squares, 6x6x1" angles.

Radial drill, 5' Pond, motor driven.

Radial drill, 5' Bickford universal.

Saw, Newton No. 2 cold saw.

Saw, Espen Lucas No. 10 cold saw.

Shaper, 24" American.

Shapers, 12", 14", 16", 21" and 24"

stroke, assorted makes.

Shaper, 3 Bement-Miles massive

heavy duty, traveling head.

Turret lathe, flat, 3"x36" Jones & L.

Turret lathe, No. 64 Bardons &

Oliver, 2 1/2" w. f. cap., cabinet base.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Cyril J. Bath & Co., E. 70th & Mch. Ave., N. E., Cleveland, O.**

#### BORING MILLS—VERTICAL.

42" King, 2 swivel hds., rapid trav.	54" Colburn, rapid traverse, mtr. dr.
44" Baush, 2 swivel heads.	60" Niles, 2 swivel heads and one internal boring head.
52" King, 2 swivel hds., rapid trav.	

#### BORING MILLS—HORIZONTAL.

3" bar Binasse, table type.	5" bar Beaman & Smith, floor type.
No. 21 Lucas, table type.	8" bar Beaman & Smith.
30" bar Rochester, floor type.	Morton floor type boring, drilling and slotting machine.
34" bar Landis, floor type.	

#### BENDING ROLLS.

12" Niles plate bending rolls, with two 18" rolls & one 15" roll; cap. 1½"; m. d.

#### DRILLS.

54-spindle 20" Barnes.	No. 1, 8' wall radial.
5' Bickford, radial.	

#### DRILLS—UPRIGHT.

24" Cincinnati, slid. hd., fric. bk. grs.	32" Cincinnati, with tap. att.
28" Cincinnati, sliding head.	24" No. 25 Foote-Burt, 90%.
30" Aurora, sliding head.	

#### FORGING MACHINES AND BULLDOZERS.

4, 5, & 25 Bulldozers.	250-ton Mesta steam hydraulic, 85%.
1" & 2" Forging machines.	

#### GRINDERS.

10x36" Modern univ., and parts.	18x36" Norton plain.
84" Diamond surface, 85%.	Mammoth shear blade, cap. 100" long

#### LATHES.

14" to 20" tool room, various lengths.	32"x18' Schumacher, cone head.
25"x12' LeBlond heavy duty.	36"x12' Bridgeford, grd. hd., mtr. dr.
30"x16' Lodge & Shipley selective geared head, arranged m. d.	48"x28' Bridgeford, grd. hd., t. a.
32"x14' Boyes & Emmes, dbl. b. g.	48"—60"x34' Houston, Stanwood & Gamble, grd. head, motor drive.

#### MILLING MACHINES.

Style "B" Gooley & Edlund, (2).	No. 4 Cincinnati high power miller.
No. 3 Brown & Sharpe, plain.	Becker miller, model "C," table
No. 3B Brown & Sharpe, plain.	14"x34".

#### PLANERS AND SHAPERS.

30"x30"x8' Gray, single head.	48"x48x18' Pond, 4 heads, heavy duty.
30"x30"x8' Cincinnati, single head.	20" American crank shaper.
72"x72"x16' Betts, four heads.	

#### PUNCHES AND SHEARS.

No. 4 Doelger & Kersten alligator shear.  
 6x6 Hillis & Jones angle shear.  
 54" gap American ship punch, capacity 1" thru 1".  
 54" throat, Long & Allstatter capacity about ½" thru ¾".  
 Kling Bros. horn press, 60" horn, flywheel 50" dia., 64" face.  
 48" throat No. 4 Southwark, capacity 2"x1½".  
 No. 6 Quickwork rotary shear, capacity up to 1½" plate.  
 36" throat Lennox rotary shear, capacity about ½" plate.

#### TUMBLING BARRELS.

Several sets 18"x48" chill lined square, with roller bearings and exhaust.

#### TURRET LATHES AND SCREW MACHINES.

3"x36" Jones & Lamson.	18" Libby, bar and chucking equip.
No. 3A Warner & Swasey.	No. 4 Bardons & Oliver.

#### MISCELLANEOUS.

Acetylene generator.	Hammer, 100 lb. Bradley helve.
Blower, No. 4 Root, motor drive.	Pipe machines, 2" & 4" Jarecki.
Cold saw, 48" Newton.	Press, No. 66 Consolidated, 4" str.
Gear cutter, 36" Gould & E.	Pyrometer, Brown.
Hack saw, 9" Peerless high speed, quick change gear.	Slotter, 48" Niles - Bement - Pond, motor drive.

## SECOND-HAND MACHINERY

### FOR SALE BY

**J. P. Rentschler & Co., - 6722 N. Maplewood Ave., Chicago**

#### PRESSES.

No. SP-1 Sundstrom hand lever.  
No. 87 Bliss foot-lever press.  
Nos. 18 & 18-C Bliss, o. b. i.  
No. 0 Wm. Freck, o. b. press.  
No. 3 R. & K. inclinable, 4" str.

No. 3 Perkins horn press.  
No. 248 Cameron auto. press.  
No. 3 double crank, 36" wide, 3" str.  
No. 1½ Bliss, toggle drawing.  
No. 3-C Bliss, toggle drawing.

#### MISCELLANEOUS.

Can making machinery—large assortment of new and used.  
Grinder, 12"x36" No. 2 Cincinnati, cylindrical, full universal.  
Power square shear, No. 30 Niagara, capacity 20 ga., length 30".  
Partial List—Send us your Inquiries.

### FOR SALE BY

**Tubor, Velick & Co., Inc., - 628-630 W. Lake St., Chicago, Ill.**

**Telephones: Monroe 4199-6813. No Branches**

#### PUNCH PRESSES.

No. 0 & No. 2 V. & O.  
No. 3 Niagara, (3).  
No. 15 Torris Wold.  
18-C Bliss.

Perkins punch presses, ½" str. (20).

Long & A. horn punch, cap. 1½xl.  
Swaine geared, (2).  
No. 5 Rockford, (2).  
Bliss bench presses, (5).  
Ryerson 4" radial.

#### DRILL PRESSES.

14" Excelsior.  
20" b. g., p. f., new, \$130.  
20" drill presses (40), each \$40.  
26" Weigel.  
30" Reed-Prentice.

Demco high-speed drills.  
Bench type drills.  
3½" Hilbert radial.  
Drill presses, 1-2-3-4 sp. Avey, h. s.

#### MILLING MACHINES.

No. 4 LeBlond plain.  
No. 4 LeBlond univ., sgl. pulley dr.

No. 2 Cleveland universal, s. p. dr.  
A number of hand millers.

#### LATHES.

14"x8' Hendey tool room.  
16"x 6' Hamilton, q. c., (2).  
16"x 6' Sidney, q. c., (2).  
17"x 9' Chard, q. c., (9).  
18"x 8' Lehmann, q. c., (3).

24"x10' Canadian, q. c., d. b. g., (3).  
22"x10' Cisco, q. c.  
26"x12' Prentice.  
10", 12" and 14" Shepard screw cutting, quick change.

#### PLANERS.

30"x30"x12' Niles-B.-P., 2 heads.

36"x36"x 7' Flather, 2 heads.

#### SCREW MACHINES.

Brown & Sharpe automatic.  
No. 2 Smith, hand.

Pratt & Whitney, hand, (3).  
Nos. 1, 2, 3 and 4 Foster screw mchs.

#### GRINDERS.

Bath universal, with magnetic chk.  
La Salle surface, with magnetic ck.  
Gardner No. 6 disc grinder.

No. 14 Bealy, disc.  
Emery grinders, #2 and up.

#### WOOD-WORKING MACHINERY.

Band rip saw, West Side.  
Boring mills, Andrew, (3).  
Moulders, 8" Yates C-4, (2).  
Shapers, Advance dbl. spdl., 5 h. p., a. c. motor in base, (6).  
Saw tenoners, Pettingell.

Shapers, double spindle, Whitney and Fay.  
Swing saws, Porter, (4).  
Saw table and jointer combined, portable.

#### MISCELLANEOUS.

Buffers, U. S. and Westinghouse, 5 h. p., b. b.  
Hack saws.  
Motors, 75 h. p. G. E., a. c., slip ring, 600 r. p. m., (2).  
Motors, a. c. and d. c.  
Pressed steel bench legs, (1,000).  
Leather belting. Pulleys, shafting and hangers.

Pressed steel hangers and bearings, all sizes.  
Pressed steel stools, with backs.  
Saw mandrels, #3.  
Thread hobber, Pratt & Whitney.  
Time clocks, International.  
Woodworking machines.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Reeve-Fritts Co., 558-560 W. Washington Blvd., Chicago, Ill.**

Die filing machine, No. 3 Barry.  
Drill, 24" Milwaukee, b. g., p. f.  
Drill presses, 8", 2 & 3 spindle.  
Drill press, 3-spindle Barr.  
Gear shaper, 36" Fellows.  
Lathe, 14" x 8" Hendey, q. c. g.

Pipe machine, 12" Curtis & Curtis.  
Planer, 32" x 24" x 6" Rockford.  
Planer, 52" x 72" x 14" Gray, 2 heads.  
Press, No. 3 Rockford, o. b. i.  
Press, No. 3 Toledo, o. b. i.  
Prod. lathes, 9" Porter-Cable, (4).

### FOR SALE BY

**A. F. Strafer,**

**30 Church St., New York City**

#### BORING MILLS, VERTICAL.

10'-16" Niles extension type, b. d.  
96" Betts, d. c. motor drive.  
90" Niles, friction feed, b. d.

72" Niles-Bement-Pond, heavy.  
60" Baush, heavy, quick change fds.,  
10 h. p., d. c. motor drive.

#### BORING MILLS, HORIZONTAL.

6" bar, Bement Miles, floor type.  
5" bar, Sellers, floor type.

3" bar, Betts, knee type.  
6" bar, Barrett horizontal cylinder.

#### DRILL PRESSES.

7' Baush tapping attach., box table.  
6' Reed Prentice, latest type, m. d.  
6' N.-B.-P., semi-universal, m. d.  
3' Carlton, radial, belt driven.

No. 310 Baker, high duty, cap. 24".  
26" Kern, double b. g., s. h.  
6-spindle, 20" Barnes gang drill.  
Allen high speed, 2-3-4 spindles.

#### GEAR CUTTERS.

No. 3 Brown & Sharpe automatic.  
No. 4 Brown & Sharpe aptomatic.

Gould & E. 24"-36" spur and bevel.  
No. 24 Bilton automatic gear cutter.

#### GRINDERS.

18"x96" Norton pl., arr. for motor dr.  
16"x72" Norton plain, overhead, belt  
drive, complete equip.

6"x32" Norton plain.  
No. 11 Brown & S. plain, 6"x32".  
No. 1 Landis universal, belt drive.

#### HAMMERS.

1500 lb. N.-B.-P. steam hammer.  
1400 lb. Chambersburg steam.  
600 lb. Erie steam hammer.  
500 lb. Bradley upright helve.

No. 4 type "I" Nazel motor drive.  
No. 4-B Nazel hammer, motor drive.  
No. 3-B Nazel, arranged motor dr.  
500 lb. Standard, automatic drop.

#### TURRET LATHES.

Gisholt 24" modern, motor drive.  
Gisholt 28" modern, belt drive.  
Jones & Lamson, 34" x 36" bar equip.

Greenlee 24" x 28", chuck equip.  
Steinle 24", new.  
Bardons & O., No. 4, wire feed.

#### ENGINE LATHES.

100"x50" N.-B.-P., modern, m. d.  
52"x24" Putnam, triple grd., belt dr.  
50"x36" Bement M., tr. grd. belt dr.  
42"x42" Fitchburg, triple grd., b. d.  
42"x21" N.-B.-P., triple grd., b. d.

36"x16" N.-B.-P., new, triple geared.  
36"x23" Fitchburg taper att., belt dr.  
30"x20" Fitchburg, belt drive.  
24"x12" Prentice, geared head.  
21"x 8" R. K. LeBlond, heavy duty.

#### MILLING MACHINES.

No. 4 Cincinnati plain, cone type.  
No. 3-B Brown & S. hvy. plain.  
No. 2-Y Brown & Sharpe, plain.

No. 2-B Brown & Sharpe, heavy.  
Planer type, Beaman & Smith No. 2.  
Mfg. type, B. & S. heavy No. 13.

#### PLANERS.

Niles-Bement-Pond modern electric  
rev. drive planers, sizes:  
48"x16" heavy.  
50"-36"x22" widened.  
42"x26"-42"x30" heavy.  
36"x26"-16" and 14" heavy.

120"x144"x25" Sellers.  
120"x120"x25" Niles, motor drive.  
72"x72"x30" Sellers.  
48"x48"x16" Woodward-Powell, 4 hds.  
30"x 6" D. & H. openside.

#### PUNCHES AND SHEARS.

Alligator, No. 4 Doelger & K., 5" cap.  
No. 17 Williams & White, 34" tht.  
Multipunch, L. & A. 104", 230 tons.  
Schatz triple comb., 11" capacity.

No. 4 H. & J., dbl., 48" thr., m. d.  
Angle shear, H. & J., 6"x1" cap.  
Rotary, Gray No. 1-3/16" cap.  
Rotary, No. 6 Quickwork, 1" cap.

#### ROLLS.

20" Hillis & Jones, cap. 1/2" plate.  
10" Southwork, cap. 1/2" plate.

7" Sellers, cap. 1/2" plate.  
Straightening, H. & J., 4' and 6'.

## SECOND-HAND MACHINERY

### WANTED BY

**The Stearns-Roger Manufacturing Co., - Denver, Colorado**

#### HORIZONTAL BORING MACHINE

We are in the market for a second-hand No. 31 or No. 32 Lucas horizontal boring machine. Give full particulars in first letter.

### FOR SALE BY

**M. A. Wertman Mch. Co., 505 Superior Bldg., Cleveland, Ohio**

Air compressor, small two-cylinder, garage type.  
Automatic screw machines, No. 3 Brown & Sharpe, serials above 5000, (2).  
Drill press, No. 310 Baker heavy service, 95% new.  
Drill press, 30" Barnes, b. g. & p. f.  
Drill press, 10" Burke, bench.  
Grinder, 16" d. e. dry tool grinder stand.  
Grinder, disc, No. 120 Gardner b. b. combination.  
Lathe, 10"x4" Seneca Falls "Star" bench, collets and chuck.  
Lathe, 14"x6" Von Wyck, l. c. g.  
Lathe, 18"x6" Monarch, l. c. g., d. b. g.  
Miller, Garvin No. 1 1/2 duplex.  
Millers, thread, No. 3 Lees-Bradner, collet type, (2).  
Tapper, 1/2" Rickert Shafer vertical.  
Testing machine, Brinnell, 95% new.  
Turret lathe, 3 1/2"x36" Acme, geared head, bar and chucking equipment.

### FOR SALE BY

**Fitzsimmons & Cole Machinery Company**

**1208 House Building,**

**Pittsburgh, Pa.**

Air compressor, Ingersoll 10x10, 150'.  
Blower, No. 6 Buffalo cupola, b. d..  
Bolt cutters, 1 1/2", 2", 2 1/2", 4" Landis.  
Boring mill, 42" Bullard, b. d.  
Boring mill, 84" Bickford, m. d., new.  
Boring mill, 96" Niles, m. d.  
Brake, Dreis & Krump, 10" x 3/4".  
Bulldozer, No. 25 W. & W., m. d.  
Drill, radial, 6' Prentice, s. p. d.  
Drill, 14" Hamilton upright, b. d.  
Drill, 24" Cinti upright, sliding hd.  
Drill, 38" Prentice upright, slid. hd.  
Flanger, McCabe, 1/2" capacity.  
Flanging press, 200-ton Southwark.  
Gear planer, 24" Gleason, bevel.  
Grinder, dbl. emery, wheels 18" dia.  
Grinder, 16"x45" Landis, crankshaft.  
Grinder, 16"x52" Landis, plain.  
Grinder, No. 16 Blanchard.  
Hammer, 50 lb. Mayer, upright.  
Hammer, 200 lb. Beaudry, upright.  
Hammers, 2-B, 3-B, 4-B & 4-N Nazel.  
Keyseater, No. 1 Catlin.  
Lathe, 16"x6" American, q. c. g., t. a.  
Lathe, crankshaft, 30"x14" L. & S.  
Lathe, 30"x16" L. & S., q. c. g., t. a.  
Lathe, 52"x34" Pittsb'gh, 2 car., m. d.  
Lathe, turret, 5"x30" Bardons & O.  
Lathe, wheel, 42" Niles, double end.  
Miller, univ., Oesterlein, 25"x7 1/2"x10".  
Pipe machine, 12" Williams, m. d.  
Pipe machine, 27" Jarecki, b. d.  
Planer, 36"x36"x24" Pond, 4 hds, b. d.  
Planer, 48"x38"x14" Pond, 4 hds, b. d.  
Planer, 36"x36"x20" Pond, 4 hds, m. d.  
Planer, o. s., Cleveland, 48"x45"x30".  
Press, baling hyd. No. 23-Plagemann Press, Ferracute P-1, 1 1/2" stroke.  
Press, No. 37 1/2 Bliss, s. s., 6" stroke.  
Press, toggle, No. 1 1/2 Bliss.  
Punch, hand, Bertsch H-S, 1/2"x3/4".  
Punch, hor., Cleveland, 1" thru 1 1/2".  
Punch, multiple, No. 5 H. & J., 10".  
Punch & shear, No. 15 Williams & White.  
Punch & s., Pels, type RBLUEF-26.  
Riveter, Hanna, 15" thrt., 15" gap.  
Riveter, Allen, 66" throat, 15" gap.  
Riveter, stake, No. 6 Whiting, 48" thrt.  
Rolls, angle bending, 6x6x1/4" K. & R.  
Rolls, bending, 48"x1 1/2".  
Rolls, bending, 8"x1 1/2" N.-B.-P.  
Sand blast, MacLeod, 36"x36".  
Saw, cold, 24" Higley.  
Shaper, 16" Gould & Eberhardt, b. d.  
Shaper, 20" Cincinnati, b. g., b. d.  
Shaper, 24" Gould & Eberhardt, b. d.  
Shear, angle, L. & A., cap. 8"x8"x1 1/4".  
Shear, alligator, United, cap. 14" sq.  
Shear, bevel, Marshalltown, 4", m. d.  
Shear, guil., No. 3 H. & J., cap. 2 1/2" sq.  
Shear, rot., No. 110 1/2 Bliss, 3/16" cap.  
Shear, rotary, No. 6 Quickwork, 1/2".  
Shear, squaring, Bertsch 8"x14 ga.  
Straightener, bar, No. 3 K. & R.  
Straightener, beam, No. 4 H. & J.  
Testing machine, 100,000 lbs. Riehle.



## SECOND-HAND MACHINERY

### FOR SALE BY

**Hendrie & Bolthoff Mfg. and Supply Co., - - - Denver, Colo.**

Gear shaper, No. 61 Fellows, belt driven, used two weeks.

Multi-cut lathe, No. 9 LeBlond with equipment for turning pistons, used two months.

Planer, 24"x34"x12" Cincinnati, arranged for either belt or motor drive; guaranteed condition.

### FOR SALE BY

**Chas. Molitor Machinery Co., 118-124 S. Clinton St., Chicago, Ill.**

#### LATHES.

28"x14" Schumacher-Boye, q. c. g.

24"x12" American, q. c. g., ind. turret.

24"x10" Lodge & Shipley, grd. hd.

20"x12" Hendey, taper attachment.

20"x10" Lodge & Shipley.

20"x 8" Advance, q. c. g.

18"x 8" Morris, q. c. g., dbl. g., (2).

16"x 8" Pratt & Whitney, q. c. g.,

taper, relieving attachment.

1" & 1" Hardinge precision (6).

#### MILLERS.

24" Bullard vert. rapid production.

No. 1 Brown & Sharpe univ.

No. 00 Brown & Sharpe.

No. 2B Milwaukee univ., vert. att.

No. 2 Kempsmith universal.

No. 2 Cincinnati plain.

Nos. 3, 5, 8B Becker vertical.

No. 4 Ohio rapid production.

24" Bullard vertical turret.

24" Colburn vertical.

No. 3 Kempsmith, gr. box fd., plain.

Gooley & Edlund, production.

No. 6 Transit, production.

24" Twin spline miller, P. & W.

#### SHAPERS.

24" Stockbridge, sgl. pul. drive, b. g.

21" Smith-Mills, sgl. pul. drive, b. g.

16" Smith-Mills, arr. for motor dr.

16" Smith & Mills, b. g.

20" Whipp b. g. crank.

#### DRILL PRESSES.

42" W. F. Barnes, sliding head.

24" Baker Bros. heavy duty, (3).

24" 26" Aurora, Cincinnati, etc.

22" Niles, single pulley, tapping att.

Sipp, with comp. tilting table, (2).

1-spindle Sipp, 1" cap. (4).

2-spindle Henry & Wright, 1" cap.

3-spindle Leland Gifford, 1" cap.

Large variety 14", 16", 20" & 24".

#### GRINDERS.

Bryant internal and chucking, (6).

Cincinnati universal, 4"x57" table.

No. 2 Oakley universal.

No. 1 & No. 2 Norton universal.

10"x30" Norton cylindrical.

No. 4 Gardner ball bear., 24" disc, (5).

40" Bealy and Gardner, disc.

No. 65 Heald cylinder.

No. 120 Gardner, ball bearing.

No. 6 Gardner, chuck & disc, 20x42"

table, long. and cross feed.

Cincinnati No. 1 universal.

#### SCREW MACHINES AND TURRET LATHES.

Jones & Lamson, single spindle.

No. 1 Warner & Swasey pl. hand.

No. 2 Brown & Sharpe semi-auto.

B. & S. auto. turret forming mchs.,

No. 0G (1), No. 2 (3), No. 0 (3),

No. 00 (1).

B. & S. semi-automatics, No. 2 (2),

No. 0 (3), No. 00 (2).

No. 6 Foster, power long. & cross.

1" & 1 1/2" cap. Acme, b. g., frict. h.

14" Gisholt, motor drive.

Nos. 0, 1, 2, 3 Foster and B. & O.

1 1/2", 1 1/2", 2" Cleveland auto.

3 1/2" capacity Acme universal.

16"-18" Fox turret lathes, fric. hd.

#### PUNCH PRESSES AND SHEARS.

100-ton Lourie hydraulic.

No. 33 Toledo.

No. 920 Toledo double crank.

No. 3 Rockford, inclined flywheel.

No. 3 Black & Johnson.

No. 4 Perkins.

No. 4 Bliss-Stiles, geared notching.

No. 5 Bliss-Stiles, geared.

10" Niagara square shears, 20 ga.

1" capacity slitting shear.

#### MISCELLANEOUS.

Bolt cutter, 1" Landis.

Bolt cutters, 1" Geometric (2).

Bolt cutter, 1" Acme, double head.

Broaching machine, No. 1 LaPointe.

Centering mchs., single and double.

Gear cutter, No. 13 Brown & Sharpe,

bevel and spur.

Gear cutters, Waltham auto., (4).

Keyseaters, Nos. 1 & 2 Davis.

Pipe cutter, 3" Hoe & Son.

Reducing or straight, rolls, 6"x36".

Reducing rolls, 11"x22", dbl. g.

Steel corrugating rolls, 7"x26".

## SECOND-HAND MACHINERY

### FOR SALE BY

**Brown Machinery Co., 2323 N. 9th St., St. Louis, Mo.**

Buffing lathe, Hisey 3 h. p. electric, a. c., 3 phase, 60 cycle, 220 volts.....	\$ 100.
Buffing lathe, U. S. 3 h. p. electric, a. c., 3 phase, 60 cycle, 220 volts .....	125.
Drill, 24" Aurora, sliding head, tapping attachment.....	275.
Drill, Baush No. 3 multiple, cap. 30 spdl., rectangular hd. 20x40". Price	1500.
Drill, radial, horizontal, No. 1 Barnes, double end.....	300.
Grinder, cylinder, No. 60 Heald.....	850.
Grinder, No. 14 Gardner, b. b., disk, dry, 20" disks, good cond. Price	400.
Grinder, No. 6 Besly two-spindle disk, 20" disks. Price.....	300.
Grinder, No. 1 Brown & Sharpe universal, 10x24; good condition. Price	375.
Grinders, emery, St. Louis and Western, 100 new at 50% discount.	
Hammer, size A United, motor driven.....	350.
Lathes, 16"x8" Monarch, heavy duty, each.....	400.
Lathe, 20"x8" Reed.....	300.
Lathe, turret, No. 4 Wood tilted, g. f. h., power feed, new .....	650.
Miller, No. 14 American universal, new.	
Miller, No. 1B Fox, hand & pwr. fd., 18x6x14; new, never used. Price.	350.
Motors, (40); 1 to 40 h. p., 3 phase, 60 cycle.	
Planer, 60"x60"x20" Niles, 3 heads.	
Polishers and buffers, drop head, New Britain, each.....	50.
Press, geared, No. 5 Stiles & Parker, weight about 9000 lbs.....	550.
Shear, Marshalltown No. 134 rotary spitting, cap. 4" plate; 4" throat; arranged for motor drive. Like new. Price.....	600.

### FOR SALE BY

**Peninsular Machinery Co., 429-31 E. Jefferson Ave., Detroit, Mich.**

#### LATHES.

13"x 5' Blount speed lathe.	15"x 6' South Bend l. c. g. engine, t. a.
13"x 5' South Bend, (2).	16"x 8' Bradford, l. c. g.
13"x 6' Willard, (2).	16"x10' Monarch q. c. engine, m. d., with motor.
13"x 6' Sebastian, (4).	17"x8' LeBlond rapid product'n, m. d.
14"x 6' Carroll-Jamieson.	21"x11' LeBlond, all geared, (2).
14"x 6' Reed, l. c. g., (3).	21"x12' LeBlond line bearing.
14"x 6' Reed Prentice plain turning, new, (2).	26"x10' LeBlond crankshaft.
14"x 6' Prentice l. c. g. engine, (2).	34x36 Lo-Swing.

#### DRILLING MACHINES.

3-spdl. Henry & Wright, h. s., b. b.	25" Barnes 4-spindle gang.
22½" Sibley all-geared, p. f.	No. 3 Baush multiple.
28" Barnes, s. h., taper.	

#### MILLING MACHINES.

Briggs type A.	No. 33 Kempsmith plain.
No. 32 Kempsmith.	No. 2 Brown & Sharpe plain.

#### TURRET SCREW MACHINES.

14" Defiance, f. h.	No. 3 Foster f. h. turret lathes, (2).
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24x26 Pratt & Whitney, a. c.

#### GRINDERS AND POLISHERS.

No. 10 Brown & Sharpe plain.	26" Kern, s. h., b. g., p. f. t. a.
No. 190 Greenfield universal.	No. 11 Lumsden, b. b., cup wheel, new, (2).
No. 50 Heald cylinder.	10x30 Frazer self-contained.
20" Blount wet grinders.	6x32 Norton plain cylinder.
No. 15 Bryant, motor drive.	No. 23-B Valley City disc, new.
No. 5 Oliver m. d. drill grinder.	

#### MISCELLANEOUS.

Band saw, 6" Napier.	Lapping machines, Bethel-Player, new, (2).
Broaching mche., LaPointe, Hudson make, ½" capacity.	Metal cutter, No. 1 Gray.
Centers, bench, Brown & Sharpe.	Screw slotter, No. 1 National Acme.
Cutting-off mchs. 4" Hurlbut-R., (2).	Shaper, 7" Rhodes horizontal.
Gear generator, 18" Gleason, bevel.	Tooth round's, 12" Rochester aut. (2).
Gear shapers, No. 6 Fellows, (3).	Tumbling barrels, No. 3-S Globe, (2).
Hammer, drop, No. 5 Williams-W.	

## SECOND-HAND MACHINERY

### FOR SALE BY

**Nelson Machinery Co.,**

**123-131 N. Pearl St., Green Bay, Wis.**

Bending rolls, 5'.  
Buffing stand, No. 4 Gardner, b. b.  
Keyseater, Davis No. 2.  
Lathe, 36"x18" Niles-Bement-Pond.  
Milling mche., No. 2 Garvin univ.  
Planer, 30"x30"x14" Betts, single hd.  
Press, No. 4 Rudolphi & K., o. b. i.  
Punch press, No. 3A R. & K., o. b. i.

Punch & shear, No. 3 Royersford, double end.  
Punch & shear, Rock River, single end, 18" throat.  
Screw machine, No. 2C Pratt & Whitney, hand.  
Shaper, 24" Milwaukee, crank.  
Squaring shr., 30" Kutscheid No. 2.

### FOR SALE BY

**Herman L. Winterer,**

**943-53 N. Front St., Philadelphia, Pa.**

#### LATHES.

43"x17' 44" Bement-Miles.  
37"x14' Johnson d. b. g., q. c. f., t. a.  
32"x12' Pittsburgh, heavy duty, q. c. g.  
27"x12' Bullard.  
26"x11' Wickes, q. c. g.  
25"x10' Niles, q. c. g.,  
25"x14' Hendey, q. c. g., taper attachment, oil pan, (2).

24"x14' Porter.  
21"x5' LeBond.  
20"x6' Walcott, d. b. g., c. g., (2).  
19"x10' Draper, patent head.  
18"x8' Davis, q. c., d. b. g.  
18"x7' Chard, d. b. g., semi q. c. g.  
18"x6' to 8' lathes, (6).  
And many others.

#### TURRET LATHES.

31"x25" Pond, triangle.  
3x36" Pratt & Whitney, hollow hex.  
20"x7' 6" Pratt & Whitney, back grd.  
20"x7' Bridgeport, 2 1/2" h. s.  
19"x7' Fay & Scott, back grd.  
No. 22 1/2 Garvin Monitor.

No. 3 Kempsmith.  
14"x6' Warner & Swasey.  
16"x6' Johnson, back grd.  
No. 3 Bardons & Oliver back grd.  
14"x5' 3" Pratt & Whitney, (2).  
No. 3 Foster Kimball.

#### DRILL PRESSES.

43" Gang radial, s. p. speed box.  
40" Barnes horizontal radials, (2).  
36" Bickford radial, circular base, motor driven.  
26" Rockford, tapping attachment.

28" Rockford, q. c. g. feed, (2).  
34" Barnes, s. h., geared face, comp. table.  
24" Sibley & Ware, sliding head.  
Drill presses, assorted sizes.

#### MILLING MACHINES.

No. 5 Cincinnati, table 9'x50 1/2".  
No. 15 Garvin, table 12x42".  
No. 3 Becker-Brainard, new model, q. c. g., vertical attachment.

No. 3 Hendey-Norton, q. c. g.  
No. 5-C Becker vert., rotary table.  
No. 1 Milwaukee plain.

#### PLANERS AND SHAPERS.

12"x10'x25" Sellers planer, 4 heads.  
48"x37"x9" Sellers, 2 heads.  
48" Morton draw-cut shaper.  
16" Potter & Johnston crank shaper.

15" Lodge & Davis shaper.  
15" Potter & Johnston shaper.  
14" Warren shaper.

#### MISCELLANEOUS.

Boring mill, car wheel, 60" Newton.  
Boring, drilling and milling machine, 17 1/2" Bement Niles horizontal.  
Boring mill, No. 1 Sellers, horizontal, 2 1/2" bar.  
Boring mill, No. 3 Binsse, horizontal, 2 1/2" bar.  
Centering mche., 5" Whiton, dbl. sp.  
Centering mche., 4" Whiton, dbl. sp.  
Grinder, 13 1/2"x5" Landis universal.  
Grinder, disc, No. 17 Bealy.  
Hammer, 15 lb. Bradley helve.  
Hammer, 40 lb. Bradley helve.  
Hammer, 60 lb. Hotchkiss.  
Hammers, 60 lb. Bellefonte upright; 2  
Keyseater, 18" stroke Morton.  
Pipe machine, 4" Cox.

Molding machine, 24" Taber, with roll over.  
Punch presses, all sizes, (55).  
Punch, multiple, No. 5 H. & J., gate pat., 56".  
Punch & shear, No. 2 H. & J., dbl. end, 20" th. cap., 1 1/2" in 1".  
Punch, No. 2 H. & J., 15" th., arch. jaw, 1 1/2" in 1".  
Punch, horiz., L. V., grd., cap. 1".  
Punch & shear, Industrial Wks. d. e., capacity 1/2" in 1/2"; shearing 1/2"x5".  
Riveter, air, 6" gap Allen, cap. 1 1/2".  
Slotter, 14" Niles.  
Tooth rounding mche., Schuchardt & Schutte.

Large assortment of General Machinery. Send for complete Price List.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Scott-Bansbach Machinery Co., - 130 S. Clinton St., Chicago, Ill.**

Automatic screw machine, Cincinnati 5-spindle 1"	\$1000.
Bolt cutter, 7" double head Detrick & Harvey	300.
Boring mill, Morris hor., motor drive, with motor 1-15/16" spindle	1000.
Drill presses, No. 310 Baker heavy duty, (5), each	250.
Drill press, 24" Minster heavy duty	350.
Drill presses, 36" Aurora, sliding head, p. f., (2) each	250.
Gridley, 24" 4-spindle type F, equipped	800.
Grinder, No. 2 Brown & Sharpe, surface	450.
Header, 1" National, plain type clutch	500.
Header, 1" Acme (Chapin) clutch	350.
Lathes, Porter-Cable mfg. type	200.
Lathe, 14"x6" Hendey, quick change, taper and chuck	600.
Lathe, 18"x8" Prentice, q. c., all g. h., s. p. d., with chuck	600.
Lathe, 18"x8" Carroll, quick change, d. b. g., 2 chucks	450.
Miller, 42" Briggs (Gooley & Edlund)	500.
Miller, No. 2 Kempsmith plain, quick change	450.
Miller, Oesterlein plain, q. c., 34"x19	425.
Press, geared, No. 8-M American Can, 3" str. 25000 lb. tie rod const.	2000.
Punch, 48" throat Cleveland, one through one	800.
Saw, No. 1 Cochrane & Bly cold saw, with 2 saw blades	175.
Shaper, 7" Rhodes vertical	175.
Shaper, 16" Gould & Eberhardt back geared crank	425.
Shaper, 20" Rockford, b. g., p. f.	650.
Shaper, 36" Kelly, b. g. crank, heavy duty, in operation	750.
Turret lathe, 21" Gisholt, complete with chuck and equip., good cond.	500.
Turret lathe, 24" Steinle, with chuck and side carriage	1000.

### FOR SALE BY

**Carlson Machinery Co., - - - Davenport, Iowa**

Machines on our Floor and in Transit.

#### GRINDERS

6x32" Norton plain.	No. 1 Cincinnati univ. tool & cutter.
No. 65 Heald cylinder.	No. 2 Oakley univ. tool & cutter.
No. 2 Gardner disc.	Grand Rapids Yankee twist drill.
No. 8 Besly disc.	12" Marschke elec. grinder stand.
No. 14 Besly disc.	

#### LATHES

13"x5" Shepard, geared hd., q. c.	18"x6" Lodge & Shipley, q. c.
14"x6" Hendey, geared head, q. c. taper attach., draw in attach.	18"x6" American, taper attach., q. c.
14"x6" Hendey, yoke head, q. c., relieving attach., draw-in. attach.	3"x60 Lo-swing.
15"x6" South Bend.	No. 4 Warner & S. turret lathe, b. g., friction head.
16"x8" Canedy-Otto, b. g., semi q. c.	No. 2-A Warner & S. turret lathe, universal chuck equipment.

#### GEAR CUTTING MACHINES.

No. 12 Barber-Colman.	72"x20 Cincinnati.
24" Schuchardt & Schutte.	

#### DRILL PRESSES

16" Canedy-Otto, lever feed.	4" Demco ball bearing, 7" overhang.
20" Silver, b. g.	4" Sipp ball bearing, 8" overhang.
21" Canedy-Otto, b. g., power feed.	25" Snyder, sliding head, with tapping attachment.
21" Canedy-Otto, wheel & lever fd.	4" Hammond sensitive radial, with tapping attachment.
No. 24 Canedy-Otto, bench.	
24" Hoefer 4-spindle.	

#### MILLERS

No. 1 Van Norman hand.	No. 2B Brown & Sharpe, s. p. d.
No. 1 Rockford plain.	No. 15 Garvin plain.
No. 1 Kempsmith plain.	No. 34 Ohio plain, dividing head.
No. 2 Cincinnati universal.	

#### MISCELLANEOUS

Arbor press, No. 3 Greenerd.	Die filing mac., No. 2 Cochrane-Bly.
Brake, 72" Peck, Stow & W., hand.	Press, plain, No. 20 Swaine, o. b. i.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### Bennett Machinery Co.,

30 Church St., New York City

Drills, 25" & 32" Barnes and Lodge & Davis.

Lathe, 24/48"x12' Harrington, gap.

Lathe, 30/52"x12' removable gap.

Lathe, 20"x15' Reed, 11' centers, \$350.

Lathe, 18"x10' Reed, 80" centers, \$250.

Lathe, 18"x 8' Reed, \$225.

Lathe, 18"x 7' Reed, \$175.

Lathe, 18"x 8' Davis, \$300.

Millers, No. 3 LeBlond plain, \$625.

Punch and shear, No. 2 Long &

Ailistatter, double end, 24" throat, all attachments, \$1000.

Radials, 6' Pond, 4' Dreses, cone.

### FOR SALE BY

#### McCoy-Brandt Machinery Co.,

210-14 Penn Ave., Pittsburgh, Pa.

#### BORING MILLS

24", 36" & 42" Bullard, rapid. pro.

36", 42", 48" & 60" Niles.

3 1/2" bar Bement horizontal.

5" bar D. & H. floor type.

7" bar, floor type.

#### BENDING ROLLS

8'x1 1/2", 12'x1 1/2", 16'x1 1/2", 18'x1 1/2", 18'x1 1/2", 20'x1 1/2".

#### DRILLS, RADIAL

3', 4', 5' R. P., s. p. d.

5' plain, American, m. d.

#### FORGING MACHINES

1", 1 1/2" Acme, steel, contin.

1 1/2", 2", 3" Acme, iron bed.

1 1/2", 2 1/2", 3 1/2" Acme, steel bed.

#### GEAR CUTTERS

No. 6 B. & S. 72"x13".

48" Gleason, automatic bevel.

No. 3 Brown & Sharpe.

#### HAMMERS

No. 4B Nazel.

125 lb. Bradley upright strap.

100 lb. Bradley upright comp.

50, 100, 200, 250 lb. Beaudry.

800-1600 Lane, bargains.

1500-2000 Eric.

4000 lb. Miles, bargain.

#### LATHES

36"x20' American heavy, g. h.

38"x16' Gleason, triple back geared.

48"x50' Bridgeford, g. h. double.

60"x25' old lathe, cheap.

76"x35' Niles-Bement-Pond, Al.

54"x28' M. & W. heavy roll lathe.

33"x19' Lewis, new roll lathe.

#### MILLERS

2A, 4B, 5C. 6 Becker.

No. 3 B. & S., vertical.

No. 0 Bickett, new.

Nos. 2, 5 Cincinnati.

2B, 3B, B. & S.

#### PLANERS

60"x60"x18' D. & H., c. s.

42"x42"x10' D. & H., c. s.

36"x36"x 8', 10', 18' Gray.

48"x48"x10' Pond.

60"x60"x14' Gray, 4 heads.

#### PRESSES

175D Stoll, double crank.

91C, 95B Toledo, double crank.

No. 8 Rockford.

57, 58 1/2, 59 Toledo.

73 1/2, 74 1/2, 75 1/2, 77 1/2, 78 1/2 Bliss.

No. 1 1/2 Bliss toggle.

#### PUNCHES

96" L. & A., 350-ton.

10' 5", No. 5 H. & J.

#### SHAPERS

29" Cincinnati, back geared crank.

24" G. & E., back geared crank.

#### SHEARS

10'x10 ga. Niagara.

10'x3/16" Ohl.

9'x1 1/2" M. & W., 18" gap.

120"x2" United Engineering.

No. 6 H. & J. 74"x1", 26" gap.

#### TESTING MACHINES

100,000 Spring.

200,000 Riehle.

300,000 Riehle.

#### MISCELLANEOUS

Bulldozers, Nos. 3, 5, 6, 7, 25, 29U

W.-W.

Grinder, No. 4 Gardner, dbl.end, b. b.

Screw machine, No. 0 Foster.

Turret lathe, 24" Gisholt, 6 1/2" h. s.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Trustee Hoosier Universal Machinery Co.,** • • • **Goshen, Ind.**

Drills, Minster No. 1 D. heavy duty.	Grinder, automatic, Landis No. 1.
Flat turret lathes, 2"x24" J. & L.	Hammer, power, 50 lb. ram.
Flat tur. lathe, 3"x36" J. & L., sg. sp.	Radial drill, 3' Am. sensitive.
Gear cutter, Cincinnati.	Screw machines, semi-auto, new.
Gear hobber, Gould & Eberhardt.	Tooth rounding machine, s. a.
Complete drawings, patterns, tools, jigs, materials, etc., for manufacture of 16 & 20" back geared drills.	

### FOR SALE BY

**J. L. Lucas & Son, Inc.** • • • **No. 3 Fox Street, Bridgeport, Conn.**

#### BROWN & SHARPE AUTOMATIC SCREW MACHINES

Rebuilt and fully guaranteed.

- 6—No. 00 Full automatics.
- 1—No. 00G, serial 2997, with slotting attachment.
- 7—No. 0 Full automatics.
- 1—No. 0 Turret former, serial 3007.
- 3—No. 2 Full automatics, serials (two) 3200; (1) 2800.
- 2—No. 2 Turret formers.
- 3—No. 2 Cut-offs, serials (two) 4300; (one) 1200.
- 1—No. 2G full automatic, serial 2200.

Several in the above list are rebuilt and ready for immediate shipment.

Write for full details, about our rebuilding, and for complete information about any of these machines.

### FOR SALE BY

**W. P. Little Co.,** • • • **West 9th & Front Sts., Cleveland, Ohio**

#### GRINDERS

- |                                    |  |
|------------------------------------|--|
| 14" Pratt & Whitney vert. surface. | No. 6 Bryant chucking, (2).            |
| No. 75 Heald internal, (3).        | No. 3 Modern universal.                |
| No. 1 B. & S. universal.           | 6"x18" Landis pl. self contained c. r. |
| No. 24 Gardner vert. spindle disc. | No. 10 Besly disc, pl. & univ. table.  |

#### LATHES.

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| 14"x8' American, q. c. g. and t. a. | 16"x6' Bradford, q. c. g. and t. a. |
| 18"x8' Blaisdell, semi q. c. g.     | 20"x8' Walcott, semi q. c. g.       |

#### PLANERS.

- |                              |                            |
|------------------------------|----------------------------|
| 22"x22"x 6' Davis & Egan.    | 32"x32"x14' Pond, 2 heads. |
| 26"x26"x10' Pratt & Whitney. | 36"x36"x12' Flather.       |

#### POWER HAMMERS.

- |                      |                                 |
|----------------------|---------------------------------|
| 50 lb. Beaudry, (2). | 50 lb. Bradley upright compact. |
|----------------------|---------------------------------|

#### PUNCH PRESSES.

- |                                      |                                 |
|--------------------------------------|---------------------------------|
| E. G. 22 Ferracute, grd. arch, m. d. | S. G. 55 Ferracute dble. crank. |
| No. 56 Cleveland straight side.      | No. 3 Cady, Stiles pattern.     |

#### RIVETING MACHINES.

- |                                  |                                  |
|----------------------------------|----------------------------------|
| Grant spinner No. 20, 1" cap.    | 1" Shuster rotary, elastic blow. |
| 1" Shuster rotary, elastic blow. | No. 2 High Speed Hammer, m. d.   |

#### TURRET LATHES.

- |                                    |                                       |
|------------------------------------|---------------------------------------|
| 2"x24" Jones & Lamson flat turret. | 14" Cincinnati Acme, p. f. to turret. |
|------------------------------------|---------------------------------------|

#### HYDRO-PNEUMATIC PRESS.

- Metalwood hydro-pneumatic press No. B-33, 15-ton capacity.

#### MISCELLANEOUS.

- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| Beading machine, F-20 Yoder.         | Screw mche., No. 1 Brown & S. auto. |
| Boring mill, 24" bar Lucas.          | Slotter, 8" & 10" rotary tables.    |
| Broach, 3-A LaPointe.                | Spline miller, 2" Pratt & Whitney.  |
| Cold saw, 20" Burke.                 | Tapper, 1" Rickert & S., radial.    |
| Drill, No. 25 Foote-Burt heavy duty. | Tapper, 1" R. & S. on column.       |
| Radial, 4' Bickford, s. p. d.        | Wiring machine, No. 1 Magee.        |

Partial list; send us your inquiries; 150 other tools in stock.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### McMullen Machinery Company,

Automatic, 8" Cleveland.  
Automatics, No. 00 B. & S.  
Band saw, Napier, metal.  
Cut-off saw, No. 4 N. & B.  
Drill, 31" Barnes, sliding head.  
Grinder, No. 6-A Bryant.  
Lathe, 24x26 Greenlee, flat turret.  
Miller, No. 2-H Becker vertical.

#### Grand Rapids, Mich.

Pipe machine, 6" Merrill No. 64.  
Press, Chicago scrap baler.  
Press, No. 3 Manville, d. a.  
Presses, No. 6 Manville, pillar, (3).  
Presses, No. 6B Manville, pillar, (2).  
Shear, No. 14 Pettingell, rotary.  
Shear, No. 2 W. F. Co. 36" gang.  
Welders, No. 10-A Thomson vert. (7)

Ask for Complete List.

### FOR SALE BY

#### Kemp Machinery Co.,

215 N. Calvert St.,

Baltimore, Md.

Air compressor, National, 3-cylinder vertical, 100 cu. ft.  
Broaching machines, two No. 1 and one No. 0 Lapointe.  
Grinder, edge or guide bar, 60" Springfield, practically new.  
Grinder, Blanchard No. 16, floor, motor drive type.  
Miller, plain, No. 5 Brown & Sharpe, cone type.  
Millers, 12" Cincinnati plain manufacturing, (2).  
Threading machines, one each 1" and 1 1/2" Geometric, first-class condition.  
Wood cut-off machine, Greenlee, power feed, heavy.

Also 200 other Machine Tools of various types.

Send us your inquiries.

### FOR SALE BY

#### Allegheny Gear Co.,

1011 Empire Bldg., Pittsburgh, Pa.

Blowers, pressure, Amer. Champ.  
Broaching mche., No. 3 LaPointe.  
Centering machine, No. 1 Whiton.  
Crane, locomotive, 5-ton, 35' boom.  
Drill, 2-D Colburn, 24" swing.  
Drill, radial, 5' Reed-Prentice.  
Forging machine, 24" Ajax.  
Furnaces, heat treating, annealing.  
Gear cutter No. 3A Cincinnati.  
Gear cutter, No. 12 Brown & Sharpe.  
Gear tester, No. 1 spur gears B. & S.  
Gear shapers, "Fellows" 6, 62, 612.  
Gear generators, Gleason bevel, 11", 15".  
Grinder, No. 20 Bryant chucking.  
Grinder, Landis 12"x66" plain whls.  
Grinder, No. 70 Heald internal.  
Grinders, wet tool, emery, etc.  
Hammers, steam drop, 3000, 2500, 2000, 1500, 1000.  
Hammers, steam forging, 2500 double frame 1500, 1100, 800, single frame.  
Hoists, portable, Crane.  
Lathe, 32"x14" Bridgeford, g. h., t. a.  
Lathe, 32"x10" LeBlond, s. b. g., c. r., t. a.  
Lathe, 26"x16" 6" Gleason, d. b. g. c. r., t. a.  
Lathe, 26"x10" Walcott, d. b. g., c. g., c. r., t. a.  
Lathe, 26"x9" Bridgeford, rev. gr hd.  
Lathe, 24"x17" LeBlond, b. g., c. r.

Lathe, 18"x19" LeBlond, b. g., c. r.  
Lathe, 16"x8" Hendey, s. b. g., q. c., c. r., t. a.  
Lathe, 14"x8" American b. g., q. c., c. r., t. a.  
Mill, No. 12 9" for variable sections.  
Miller, No. 4 Brown & Sharpe univ.  
Miller, No. 3 Pratt, hand feed.  
Miller, No. 5 Becker, auto. feed.  
Miller, No. 6 Becker 62", cone drive.  
Miller, No. 4 Pedrick, portable, 12".  
Miller, slab, 22"x22" 8" Ingersoll.  
Motors, 1, 2, 15, 20, 30, 50 h. p., a. c.  
Planer, Bickett 36"x36" 12", m. d.  
Planer, 30"x30", table 22"x5", 1 hd.  
Presses, Nos. 56 and 57 Toledo, trimming.  
Presses, No. 744 Bliss, trimming.  
Sand blast, MacLeod, compl. unit.  
Saw, cold, Newton 40" blade, motor drive.  
Shapers, 28" G. & E. Invincible.  
Shaper, 24" G. & E. high duty.  
Shapers, 20" Niles-Bement.  
Shear, No. 4 Doelger Kirsten, alligator.  
Shear, No. 0 Hilles-J., guillotine.  
Shear, No. E Long-Ails, guillotine.  
Shear, No. 7 Hilles-Jones, comb. punch & shear.  
Slotter, crank, cone drive, table 25".  
Turret lathe, 24" Gisholt.

Will quote special low prices.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Mid-West Machine Tool & Supply Co.,**

**Davenport, Iowa**

High-Grade Production Equipment Priced to Sell.

Automatic, 7"-14" Cleveland.

Drill, I-S Garvin duplex.

Drill, No. 14 Natco 16-sp., tap. att.

Gear tooth rounder, 12" Ingle.

Grinder, No. 10 B. & S. plain.

Grinder, 6x32" Norton.

Hobbers, Nos. 3 & 12 B. & C.

Lathe, No. 4 Milholland universal.

Miller, 18" Cincinnati, b. g.

Miller, No. 13-B B. & S., production.

Radial, 4' American heavy duty.

Radial, 4' American sensitive.

Radial, 4' Mueller.

Turret lathe, 24" Gisholt.

Partial list; send us your inquiries.

### FOR SALE BY

**The Randle Machinery Co.,**

**1733 Powers St., Cincinnati, Ohio**

Only Real Bargains of the Day!

Automatic, 4-spindle Acme.....	\$ 200.
Bolt cutter, rebuilt, 4" Acme, m. d. ....	475.
Boring mill, Niles camel back, spindle type, b. d. ....	300.
Cut-off saws, Burke 20", (2), each.....	125.
Drill, 7" Niles universal, m. d. ....	450.
Lathe, 28" Gisholt, m. d., 3 1/2" bore.....	350.
Lathe, 34" Gisholt, m. d., 4 1/2" bore.....	450.
Lathe, rebuilt 18"x6" engine lathe, l. c.....	175.
Lathe, rebuilt 24"x8" Schumacher-Boye engine lathe, l. c.....	375.
Shaper, rebuilt 12" P. & W. t. h. crank shaper.....	175.

May be of old style, but many years of good service still remain.

Also many other tools of all kinds. Send us your inquiries.

### FOR SALE BY

**Miles Machinery Co.,**

**Saginaw, W. S., Mich.**

#### AIR HAMMERS.

93 Chipping hammers, guaranteed at.....	\$ 15.
5 No. 50 riveting hammers, guaranteed at .....	30.
5 No. 60 riveting hammers, guaranteed at .....	35.

#### BOLT CUTTERS.

1" Adams.....	\$ 125.	1" Reliance, double head, with	
1" Adams.....	175.	Landis heads.....	\$ 450.
1" National.....	390.	3" Acme.....	550.

#### BROACHING MACHINES.

No. 1 LaPointe.....	\$ 225.	No. 2 LaPointe double.....	\$ 400.
No. 2 LaPointe Hudson.....	250.	No. 3B LaPointe.....	400.

#### FURNACES.

No. 10 Stewart oven, Brown		No. 100 Stewart oil tempering.....	\$ 90.
pyrometer & thermo-couple.....	\$ 300.	No. 2 Stewart crucible.....	75.

#### GEAR CUTTERS.

12"-20"x10" Gould & E. hobber.....	\$ 500.	36" Brown & Sharpe auto.....	\$ 250.
18-30"x12" Gould & E. hobber.....	750.	48" Brown & Sharpe auto.....	450.
24-36"x12" Gould & E. hobber.....	1250.	No. 12 Barber-Colman.....	1100.
26" Brown & Sharpe auto.....	250.	No. 3 Barber-Colman.....	750.

#### GRINDING MACHINES.

6"x15" Landis plain.....	\$ 600.	10"x21" Norton plain.....	\$ 350.
6"x32" Norton plain.....	750.	10"x36" Norton plain.....	1000.
8"x20" Fitchburg plain.....	750.	14"x72" Norton plain.....	

84" Diamond face and edge, priced to save you \$3000.

#### HAMMERS.

25 lb. No. 0 United.....	\$ 150.	125 lb. Bradley upright strap.....	\$ 450.
40 lb. Bradley cushion helve.....	325.	150 lb. Bradley upright strap.....	525.
50 lb. Bradley upright strap.....	325.	1100 lb. Niles-Bement-Pond ..	1250.
100 lb. Bradley upright strap.....	425.	No. 2 Nazel.....	950.
100 lb. Bradley cushion helve.....	565.		



## SECOND-HAND MACHINERY

### FOR SALE BY

#### Schmitz & Co.,

Drill presses, 3-spindle sensitive,  
No. 1 taper, (2).  
Drill press, 25" Barnes, b. g., p. f.  
Furnace, hardening, 18"x18"x24".  
Lathe, bench, 7 1/2" Van Norman.  
Lathe, 18"x8" Reed, pan bed.

#### 35 S. Clinton St., Chicago, Ill.

Punch pr'ss's, D-52 & No 3 Ferracute.  
Paper cutter, 30" Sheridan.  
Speed lathe, 12"x5" Hendey.  
Thread roller, 1/2" Waterbury-Farrell.  
Wood turning lathe, 16", with lot  
of extras.

### FOR SALE BY

#### A. M. Stoehr Machinery Co.,

Boring mills, 42" Baush; 54 & 60"  
Niles; all have 2 heads; and others.  
Compressors, 12 different sizes.  
Drill presses, single spdl., L. & G.;  
2-spindle H. & W.; 4-spdl. Foote-  
Burt; 4-spdl. Barnes; 22" Rockford.  
Furnaces, melting, for soft metal and  
aluminum.  
Gear hobbors, cutters; 72" Brown &  
Sharpe; 60" Gould & Eberhardt;  
36" Fellows gear shaper.  
Grinders, No. 3 LaSalle plain and  
surface; 3x18" Norton, and others.  
Lathes, 18x8 Barnes, hvy. duty; 19x8  
LeBlond, q. c. g.; 16x8 Flather; 15  
& 24 spinning, and others.  
Milling machines, No. 6 Whitney;  
No. 0 Rockford pl.; No. 3 Thurston  
dieing; No. 2-B Kearney & Trecker  
late type, double arm.

#### 560 W. Adams St., Chicago, Ill.

Oil extractors, centrifugal, (8).  
Pipe machines, 6" Jarecki.  
Punch presses, No. 16 Bliss horning;  
No. 3 Walsh, o. b. i., and others.  
Punch & shears, No. 3 Long & A.,  
d. c., 1/4" thru 1/2"; No. 14 W., d. e.,  
15" throat; No. 5 Long & A.; d. e.  
Riveters, No. 4-A & No. 5-A High  
Speed; No. 1 L. & A., 1/4" capacity;  
No. 80-B & No. 2 Grant rivet spin-  
ner & hammer; No. 8 Stimpson  
automatic, for split rivets.  
Saws, 9x9 Sterling high speed; 12"  
band, and eight others.  
Screw machines, Nos. 2 & 3 Foster  
(12); Nos. 52 & 53 Acme, others  
plain and automatic.  
Tapper, R. & S., 1/4" capacity.  
Welders, both spot and butt.  
Wire straightening machines, (5).

### FOR SALE BY

#### J. E. Haetten & Co., Inc.,

#### 50 Church St., New York, N. Y.

Automatics, 00 Brown & Sharpe, serials 1500, (2), each.....	\$ 400.
Automatics, 1/2"-3/4" Cleveland model B, (8), each.....	100.
Boring mill, 46" Rogers, 2 swivel heads, geared feeds.....	650.
Boring mill, 42" Bullard, 1 turret, 1 swivel head, p. f., r. t.....	1500.
Broach, No. 2 LaPointe Hudson enclosed head.....	250.
Conveyor, 51' Stearns portable 24" belt conveyor.....	1200.
Drill, 7' Cincinnati Bickford, enclosed head, gear box drive.....	2250.
Gear shapers, 36" Fellows, very good, (6), each.....	450.
Grinder, 6x32 Norton, serial 6440.....	450.
Grinder, No. 72 Heald internal, hydraulic table.....	1750.
Grinder, No. 65 Heald cylinder, serials above 500.....	900.
Grinder, 18x96 Norton plain, belt drive.....	900.
Hammer, 200 lb. Gould & Eberhardt, sheave lift.....	250.
Lathe, 14" x 6" Hendey, yoke head, taper attachment, chuck, A1.....	650.
Lathe, 21" x 8" LeBlond, geared head, motor drive, A1.....	650.
Lathe, 18" x 14" F. E. Reed, s. b. g., loose change gear, good.....	175.
Lathe, 16" x 10" F. E. Reed, s. b. g., loose change gear, good.....	150.
Lathe, 25" x 42" x 10" Harrington sliding bed gap.....	650.
Miller, 30" x 30" x 16" Ingersoll, fixed rail, 3 spindle, motor arr.....	2000.
Miller, 36" x 28" x 20" Ingersoll, fixed rail, 6 spindle, motor arr.....	4000.
Miller, 1 1/2 A Milwaukee plain, vertical attachment.....	750.
Miller, 24" x 7" Brainerd slab miller.....	350.
Planer, 30x30x12 Pease, 1 head, belt drive.....	400.
Tapper, No. 2X Garvin plain, A1 condition.....	275.
Turrets, No. 6-A Potter & Johnston, (5) each.....	400.
Turrets, 3x36 J. & L. arranged for bar work.....	600.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Edward L. Klauber,**

**320 South Third St., St. Louis, Mo.**

Bolt cutter, Little Giant, 1" cap.  
Bolt cutter, National, 1/2" cap.  
Bolt cutter, National, 3/4" cap.  
Bolt cutter, Landis, 2" cap.  
Buffers, New Britain, drop head.  
Drill, 42" wall type radial.  
Drill press, 34", b. g., s. h., t. a.  
Grinder, No. 2 Cinti univ. 12x36.  
Grinder, B. & S. No. 3 cut. & reamer.  
Grinder, No. 11 Brown & S. plain.  
Grinder, No. 10 Besly disc, ring wh.  
Hydraulic press, 7 1/2 ton.

Lathe, 16x5 Hendey, q. c. g., t. a.  
Lathe, 14"x6' Monarch, d. b. g., q. c. g.  
Lathe, 16"x8' Monarch, d. b. g., q. c. g.  
Lathe, 16"x8' Lodge S., q. c. g., d. b. g.  
Lathe, 16"x8' South Bend, plain chge.  
Lathe, 21"x8' LeBlond, q. c. g., d. b. g.  
Lathe, 26x10 C. M. C., d. b. g., q. c. g.  
Ovens, japanning, 10"x12"x8'.  
Planer, American 30"x30"x8'.  
Punch press, No. 2 Rockford.  
Punch press, No. 3 Toledo.  
Shaper, 16" Smith & Mills.

### FOR SALE BY

**Hill, Clarke & Co., Inc.,**

**156 Oliver St., Boston 9, Mass.**

#### PLANERS.

17"x4' Whitcomb Mfg. Co.  
22"x22"x5' Putnam.

22"x22"x5' Powell.

#### DRILLING MACHINES

Aurora 24", sliding head, b. g.

Gang 2 1/2' plain radial.

#### GRINDERS

No. 1 Diamond, wet tool.  
20" Taylor & Fenn, wet tool.

No. 12 Modern plain.  
6"x30" Atlas M. T. Co., plain.

#### MILLING MACHINES

Milwaukee No. 3-B plain, single overarm.

Becker No. 5B vertical.  
Becker No. 8 duplex.

#### MISCELLANEOUS.

Boring mill, 53" Niles vertical, two swivel heads, late model, like new.  
Brake, hand, Peck, Stow & Wilcox 8", cap. 18 gauge.  
Broaching machine, Lapointe Machine Tool Co. No. 1.  
Cutting-off saws, J. T. Burr No. 1 (2).

Broaching machine, Lapointe Machine Tool Co., No. 3.  
Hammer, steam, 500 lb. David Bell & Son.  
Shear, New Doty No. 7-B.  
Shear, alligator, Canton Foundry & Machine Co. No. 2.

### FOR SALE BY

**Syracuse Supply Company.**

**314 W. Fayette St., Syracuse, N. Y.**

Guaranteed NEW MACHINES in original crates at prices below list:

Automatic, 2 1/2" Gridley, single spd.  
Crucible, FD-104 Hoskins.  
Grinders, Diamond wet tool.  
Lathe, 3x60 Fitchburg lo-swing.

Pipe machine, No. 70 Forbes.  
Screw mchs., No. 4 W. & S., g. f. h., (3).  
Straightener, No. 2 1/2 Corey.

#### Exceptional values in USED TOOLS:

Automatic, 1 1/2" model B., Cleveland.  
Automatic, 1 1/2" model A., Cleveland.  
Bolt threader, 2-spindle Acme.  
Drill press, 25" W. F. & John Barnes.  
Drill press, 4-spindle Barr sensitive.  
Drill press, 2-spindle Barr sensitive.  
Lathe, 14"x 6' American.  
Lathe, 14"x 6' Monarch.  
Lathe, 16"x 8' American, geared head, rebuilt.  
Lathe, 16"x 8' Monarch.  
Lathe, 16"x10' American.  
Lathe, 8x60 Fitchburg lo-swing.  
Millers, 3 1/2 Bilton automatic (4).  
Miller, 1 1/2 Bilton automatic.

Miller, No. 5 Becker vertical.  
Millers, No. 4 LeBlond plain (2).  
Planer, 30"x30"x16' L. W. Pond.  
Planer, 60"x60"x22' Niles.  
Radial, 5' Pond.  
Tilted turret, No. 6 Wood.  
Turret lathes, No. 4 Foster (2).  
Turret lathe, No. 2 Warner & S., hollow hex.  
Turret lathe, 2 1/2x26 Pratt & Whitney.  
Turret lathe, No. 2 1/2 s. g. Garvin.  
Turret lathes, 3x36 Jones & L. (3).  
Turret lathe, 2x24 Jones & Lamson.  
Turret lathe, 21" Gisholt.  
Turret lathe, No. 3 Cincinnati-Acme.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Foster Machinery Company,**  
Angle shear, No. 2 Cleveland, 4x4 1/2"  
angle.  
Boring mill, vertical, 42" Bullard.  
Grinder, No. 60 Heald, cylinder.  
Grinder, Greenard, tool & cutter.  
Grinder stand, Western No. 4, two  
14" wheels.  
Keyseater, No. 1 Baker, 1 1/2" key.  
Lathe, 16"x8" Monarch.  
Lathe, 18"x8" Lodge & Shipley.  
Miller, No. 00 Brown & S., hand.

**10203 Quincy Ave., Cleveland, O.**  
Miller, No. 00 Owen, Fox type.  
Planer, 26"x26"x8' Gray.  
Riveter, Hanna, 24" throat, 15" gap,  
1/4" rivet.  
Rolls, bending, 6'x8" H. & J.  
Shear, 11'x16 ga. Streine.  
Shear, alligator, Canton, cap. 1 1/2' sq.  
Shear, slitting, 36"x18" gap, foot.  
Squaring shears, No. 210-A Pexto,  
power.  
Trolleys, I-beam, 1 & 2 ton.

### FOR SALE BY

**Economy Machinery Co., 428-430 E. Pearl St., Cincinnati, Ohio**

#### Rebuilt Machinery

Drill, 4-spindle, Foote-Burt No. 1 1/2, adj. 5 1/2" to 48", Morse No. 4.....	\$450.
Drill, Baush 16-spindle.....	400.
Gear shaper, Fellows 36".....	250.
Lathe, 20"x8" U. S., 5-step, s. b. grd., q. c. g. box, c. r. & c. s.....	375.
Lathe, 21"x8" LeBlond, 3-step, d. b. grd., q. c. g. box, c. r. & c. s.....	450.
Lathe, 24"x12" L. & S., s. p. drive, q. c. g. box, c. r. & c. s.....	600.
Lathe, 26"x10" Walcott, 3-step, d. b. grd., c. s.....	600.
Millers, LeBlond No. 3, 3-step, d. b. g. gr. box, c. s. support.....	500.
Miller, Cincinnati No. 4, same, with vertical attachment.....	600.

Let us know your wants.

### FOR SALE BY

**Jones Machine Tool Co., - Front & Pike Sta., Cincinnati, O.**

#### LATHES.

16"x 6' LeBlond, q. c. g.	20"x 8' American, q. c. g.
16"x 8' Hendey, q. c. g. & t. a.	26"x12' Reed, l. c., t. a.
18"x10' Reed Prentice, grd. head.	30"x12' Houston Stam., q. c. g.
20"x10' Lodge & Shipley, q. c. g.	30"x16' Lodge & Davis.

#### MILLING MACHINES.

No. 1 1/2 Valley City universal.	No. 3 Brown & Sharpe plain, (2).
No. 3 Cincinnati plain.	No. 3 LeBlond plain.
No. 4 Cincinnati plain.	No. 3 B. & S. vert., s. p. drive.

#### RADIALS AND DRILL PRESSES

48" Bickford, cone drive.	24" Rockford, sliding head.
72" Niles, cone drive.	30" Cincinnati, sliding head, t. a.
72" Dreses, motor drive.	42" Bickford, stationary head.
24" Hoefler, stationary head.	

#### PUNCH PRESSES AND SHEARS.

No. 2 Niagara.	No. 6 Whiting, single end.
No. 3 A Willard, o. b. inclinable.	No. 4 Bliss.
No. 3 Robinson, o. b. i.	No. 85 Bliss, d. b. g.

#### PLANERS AND SHAPERS.

24"x 6' Powell 1 head.	16" Smith & Mills shape.
30"x 6' Gray, 2 heads.	25" Smith & Mills, b. g.
48"x36"x12" Cincinnati, 2 heads.	24" Kelley.

#### MISCELLANEOUS.

Bolt cutters, 1" & 2" Acme.	Grinders, No. 60 Heald, cyl., (3).
Boring mill, 42" Bullard.	Grinder, No. 70 Heald, chucking.
Boring mill, 10' Niles.	Hammer, steam, 800 lb. Niles.
Chain hoists, various sizes, (50).	Keyseater, No. 2 Baker.
Gear hobber, 24" S. & S.	Millers, hand, (6).
Gear hobber, Barber-C. No. 12.	Slotter, 10" Niles vertical.
Grinder, 10x50 Norton.	Square shear, 62" Robinson 12 ga.

Write for our latest Stock List.

## SECOND-HAND MACHINERY

### FOR SALE BY

Clinton Machinery Co., - - - 128 So. Clinton St., Chicago, Ill.

Phone Dearborn 9039

#### MILLING MACHINES.

No. 3H LeBlond, univ., fully equipt.  
No. 3 LeBlond plain.  
No. 20 Van Norman, fully equipt.  
No. 34 Ohio plain.

No. 24 LeBlond plain.  
No. 14 Cincinnati univ., fully equipt.  
No. 00 Brown & Sharpe hand miller.  
No. 1 Standard hand miller.

#### LATHES.

20"x8' Giddings & L., s. q. c., compl.  
16"x10' Van Wyck, complete.  
16"x8' Prentice, q. c. g., complete.

14"x6' Hendey, q. c. g., complete.  
10"x5' Seneca-Falls, complete.  
9"x4' Seneca-Falls, complete.

#### DRILL AND PUNCH PRESSES.

2-spindle Allen, 14".  
4-spindle Taylor-Fenn, like new.  
Single-spdl. H. & W., b. b., h. s., (2)  
22" Cincinnati, wheel & lever feed,  
b. g., s. h., with tapping attach.

20" Excelsior, b. g., p. f., h. & l. fd., (3).  
3' Cincinnati-Bickford radial, with  
variable speed motor.  
No. 3 Swaine, o. b. l., (2).  
No. 4 American Can, o. b. i.

#### SCREW MACHINES.

1/2" Gridleys "model F", mtr. driven,  
fully eq. with collets & tools, (4).

No. 1 Warner & S., with wire feed.  
1/2" cap. Pratt & W., with wire feed.

#### MISCELLANEOUS.

Keyseater, No. 1 Davis.  
Shaper, 14" S. & M. complete.

Shapers, 20" G. & E., b. g.  
Shear, 30" power square, 14 ga. cap.

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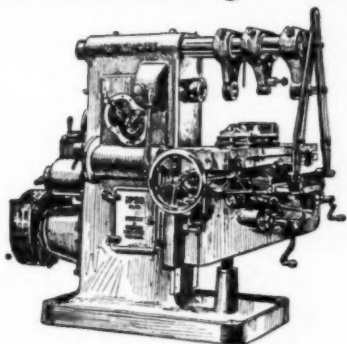
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We have left a few of these excellent bargains in the styles listed below. Every machine has been completely disassembled, re-scraped, and new parts put in wherever necessary. A K & T rebuilt is thoroughly tested and carries the same accuracy guarantee as a new machine. First come, first served. Better write at once.

## 2BS Plain—Double Overarm

2A Mfg.—Double Overarm	3B Plain—Single Overarm
2B Plain—Double Overarm	3B Plain—Double Overarm
2B Univ.—Double Overarm	4B Plain—Double Overarm
3B Vertical	4B Vertical

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**KEARNEY & TRECKER**  
CORPORATION

5926 National Ave.,

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# REAL VALUES—R

## MILLING MACHINES

No. 3 R. K. LeBlond universal, cone type, complete.  
No. 1½ R. K. LeBlond universal, cone type, complete.  
No. 5 R. K. LeBlond plain, s. p. d.  
No. 3-B Heavy Brown & Sharpe plain, single pulley drive.  
No. 3 Kempsmith pl., cone type.  
No. 3 Cincinnati plain, cone type.  
No. 2 Kempsmith pl., cone type.

No. 2 Cincinnati plain, cone type.  
No. 2Y B. & S. plain, cone type.  
No. 0 Cincinnati plain, cone type.  
No. 3 Brown & Sharpe vertical, single pulley drive.  
No. 5 Becker vertical, cone type.  
No. 7 Becker, Lincoln Type Mfg. Hendey Lincoln Type Mfg. Miller.  
Gooley & Edlund BRIGGS Type Mfg. Miller.

## SHAPERS AND PLANERS

24" Smith & Mills B. G. Crank.  
24" John Steptoe B. G. Crank.  
20" Cincinnati Back Geared Crank Shaper, with revolving table.  
20" Rockford Back Geared Crank Shaper, single pulley drive.  
16" John Steptoe B. G. Crank.

15" American Tool Works Crank, 26"x26"x8" American Tool Works Planer, one head on rail.  
36"x36"x10" Powell Planer, two heads on rail.  
38"x38"x18" Niles Tool Works Planer, two heads on rail.

## ENGINE LATHES

30"x12" LeBlond, hvy. duty, q. c.  
24"x12" LeBlond, q. c.  
24"x10" American Tool Wks., q. c.  
24"x10" Boye & Emmes, q. c.  
21"x12" LeBlond, hvy. duty, q. c. geared head.  
21"x10" LeBlond, hvy. duty, q. c.  
20"x10" Bradford hvy. duty standard change.  
18"x11" Chard, heavy duty, q. c.

18"x 8" Lodge & Shipley, q. c.  
18"x 8" Mueller, q. c.  
16"x 8" LeBlond, q. c., taper att.  
16"x 8" Lodge & Shipley, q. c.  
16"x 6" Hendey, yoke head, qk. c., taper attachment.  
14"x 6" Lodge & Shipley q. c., Tool Room Lathe, with taper and collets.

## TURRET LATHES AND SCREW MACHINES

24" Gisholt Turret, late type, 6¼" hole in spindle.  
3"x36" Jones & L. Flat Turret.  
2½"x26" Pratt & W. Flat Turret.  
13" Gisholt Turret, taper attach.  
No. 6 Warner & S. Turret Lathe.  
2" Pratt & Whitney Turret Lathe.  
No. 4 Univ. W. & S. Turret Lathe.  
No. 4 Warner & S. Turret Lathe.

No. 4 Bardons & O. Turret Lathe.  
No. 4 Brown & Sharpe plain head wire feed screw machine.  
No. 3 Foster Turret Lathe.  
No. 2 Warner & Swasey Turret Screw Machine.  
No. 1-S.P. Garvin Screwmach.; new.  
¾" Bardons & Oliver Turret Screw Machine.

## RADIALS AND UPRIGHT DRILLS

5" Prentice Bros. Plain, gr. box dr.  
4" Fossdick Plain, cone pulley dr.  
3" American Tool Works Triple Geared Plain, gear box drive.  
2½" Carlton High Speed Ball Bearing Sensitive Radial.  
Nos. 1 & 3 Barnes Hor. Radials.  
28" Aurora Upright, tapping att.  
26" Prentice Bros. Upright, g. b. d.

26" W. F. & John Barnes Upright.  
24" Cincinnati-Bickford Upright Drill, tapping attachment.  
24" Cincinnati-Bickford Upright Drill, gear box drive.  
24" Aurora Upright Drill.  
23" Rockford Upright Drill.  
22" Aurora Upright tapping att.  
22" W. F. & John Barnes Upright,

# EASTERN MACHINERY CO., 408 E

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# Rebuilt Machinery

20<sup>th</sup> Superior Upright Drill.  
3-spindle 26" W. F. & John Barnes  
Gang Drill Press.  
No. 310 Baker Bros. Heavy Duty.  
No. 3 Colburn Heavy Duty.

No. 2 Avey H. S. Ball Bearing.  
Class B Henry & Wright High  
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6-spindle Henry & Wright High  
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## GRINDERS AND GEAR MACHINERY

No. 60 Heald Cylinder Grinder,  
late type, complete.  
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Capital Internal Grinder with collets.  
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8"x30" Modern Pl. Self contained  
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Nos. 1 & 3 B. & S. Univ. Grinders.  
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No. 1 Wilmarth & Morman Hand  
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B. & S. Planer Type Surface Grinder.  
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No. 4-36" Brown & Sharpe Auto.  
Spur Gear Cutter.  
No. 3-26" Brown & Sharpe Auto.  
Spur Gear Cutter.  
24" Gould & Eberhardt Auto.  
Spur Gear Cutter.  
No. 12 B. & S. Auto. Spur & Bevel  
Gear Cutter, cap. Gears up to 12".  
18H G. & E. Auto. Gear Hobber.  
No. 6 Fellows Gear Shaper.

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No. 4 and No. 5 Greenard Arbor Presses.  
24" Bullard Vertical Boring Mill, rapid production type.  
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2" Landis Dbl. Spindle Bolt Threading Machine, with lead screw attach.  
1 1/2" National Dbl. Sp. Bolt Threading Machine, with lead screw attach.  
1 1/2" Acme Class A Bolt Cutter.  
1" Landis Bolt Threading Machine, with lead screw attachment.  
15-Ton Lucas Power Forcing Presses.  
No. 2 and No. 3-B J. N. LaPointe Broaching Machines.  
8"x8" Atkins Kwik-Kut, power Hack Saw.  
6"x6" Racine High Speed Power Hack Saw.  
600 lb. Chambersburg Steam Hammer.  
200 lb. Bliss Board Drop Hammer.  
Nos. 1 1/2-B & 2-A, hvy., Nos. 3A and 4-A High Sp. Riveting Hammers.  
No. 3 Baker Bros., Keyseater, capacity 3 1/2".  
No. 2 Toledo, o. b. i. Power Press.  
No. 2 Michigan, o. b. i. Power Press.  
No. 8 Chas. Lefter, o. b. i. Power Press.  
No. 242 Niagara Power Shear, cap. 14 gauge and lighter.  
10" Niagara, Power Shear, capacity 10 gauge and lighter.  
No. 2-X Garvin Automatic Tapping Machine.  
Federal Electric Spot Welder, cap. to weld two pieces of 1/4" material.  
10"x10" Curtiss Double Cylinder Air Compressor.  
16"x14" Chicago Pneumatic Tool Co's class N. S. B., Air Compressor.

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- 14"x 6' Worcester Semi Quick Chge., New, \$275.
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- 18"x 8' Morris Q. C., New, \$750.
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- 20"x 12' LeBlond Single B. G.
- 21"x 8' LeBlond H. D. 220 v., D. C.
- 22"x 10' Morris Geared Head, New.
- 22"x 12' Morris Q. C., New.
- 26"x 16' Davis, Single B. G.
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- 32"x 17' Pond Single B. G., Cone.

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- 26" Bement Dbl. Traveling Hd., Mtr.
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- 19" Putnam Slotter, Belt.

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- 5' Niles Universal Gear Box.
- 5' Niles Semi-Universal Gear Box.
- 6' Niles Semi-Universal Gear Box.
- 6' Niles Full Universal Gear Box.
- 6' Niles Universal, Motor.

## BORING MACHINES

- 62"-4' Bar N.-B.-P. Horiz. B & D, 220 v., D. C.
- 5' Bar Niles Floor Borer.
- 18" P. & W. Side Head Mill.
- 42" Niles B. & T. Mill.
- 44" Niles, with R. H. Turret Head, 220 v., D. C.
- 44" Niles B. & T. Mill, Heavy.

## PLANERS

- 26"x 26"x 6' Niles, 1 Head.
- 26"x 26"x 6' Gray, 1 Head.
- 30"x 30"x 8' Niles-B.-P., 2 Heads, Rev. Motor.
- 32"x 32"x 10' Niles, 2 Heads.
- 32"x 32"x 12' Pond, 2 Heads, Motor.
- 36"x 36"x 10' Niles, 4 Heads.
- 38"x 38"x 12' Niles, 2 Heads.
- 38"x 38"x 16' Niles, 3 Heads.
- 42"x 42"x 12' Niles, 4 Heads.
- 42"x 42"x 14' Pond, 4 Heads, Motor.
- 48"x 48"x 16' Pond, 4 Heads.
- 48"x 48"x 20' Pond, 4 Heads, M. D.
- 96"x 72"x 12' N.-B.-P. Rev. Motor.
- 10'x 10'x 36' Betts, Motor.
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## MISCELLANEOUS EQUIPMENT

- 610' Runway, suitable for 25-ton Cranes up to 115' span.
- ¾" Cap. L. & A. Plate Shear, Motor.
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- 2" Cox Lever Grip Pipe Machine, D. C. Motor.
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# New & Guaranteed Rebuilt Machine Tools

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- 2—Bullard 24" & 36", n. e. type.
- 1—Giddings & Lewis No. 0 horiz.

## DRILLS—Upright and Radial

- 15—Allen 1, 2 and 6-spindle.
- 1—Colburn No. 4.
- 1—P. & W. No. 1 gun barrel.
- 2—New Turner No. 3, vert. tur.
- 2—Baker No. 310.
- 1—American No. 4.
- 1—Baush 6" Radial.
- 1—N.-B.-P. 96" Ridgeway, motor drive, plain Radial.

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- 1—Natco No. 14, rect. head.
- 2—Baush No. 3, 21 spindle.
- 1—New Baush No. 4, 56 spdl.
- 2—Baush No. 2, 24 spindle.
- 1—New Avey No. 2½, 4-sp. hi. sp.
- 3—Pratt & W. No. 11, round hd.
- 1—Moline, 4-spindle.
- 1—Foote-Burt No. 17, 6-spdl.

## SCREW MACHINES—Automatic

- 16—B. & S. Nos. 0, 2 & 6 full auto.
- 14—Gridley 4-spindle, ¾", 1¼", 1¾", 2", 2½".
- 2—Gridley 4¼", 3¼" S. S.
- 2—Cleveland 1¼" Model B.
- 8—Cleveland ¾", 1¼", 2¼", A.
- 1—Cleveland 7¼" A.
- 1—New Britain 1x5 bar.
- 10—New Britain Nos. 23, 24, 33.

## MILLING MACHINES

- 9—Van Norman No. ½ Duplex.
- 1—Newton Duplex.
- 1—Cincinnati 48" Duplex.
- 1—Brown & Sharpe No. 3 univ.
- 2—Hendey No. 1 universal.
- 2—Rockford Nos. 1½ & No. 2.
- 4—Cincinnati Nos. 2, 3 and 4 pl., cone drive.
- 4—B & S Nos. 2, 2B, 3B and 4 pl.
- 1—B. & S. No. 13-B Plain.
- 1—Cincinnati No. 3 vertical.
- 1—Milwaukee No. 1½-B vert.
- 2—Taylor & Fenn vertical.
- 12—Becker Nos. 3H, 4B, AB, 5C, C vertical.

## MILLING MACHINES—Cont.

- 2—P. & W. 4½x12 Thread.
- 8—P. & W. 6x14, 6x48, 6x80 Thread.
- 4—Lees-Bradner Nos. 6, 8.
- 25—P. & W. No. 5 auto.
- 30—P. & W. No. 4, Spline.

## LATHES

- 1—Lodge & S. 30"x16", grd. hd.
- 3—Putnam 42"x44", grd. hd., dbl. carriage, arr. motor drive.
- 3—Bridgeford 48x50, grd. head, dbl. carriage, arr. motor drive.
- 1—Niles-B.-P. 72x74 forge turning and boring lathe, 2 carriages, arrange motor drive.

## GEAR CUTTERS

- 15—Barber-Colman Nos. 3 & 12.
- 4—Hercules 6".
- 7—Brown & S. 3x36; 3x26; 4x36.
- 3—G. & E. No. 18-H.
- 2—G. & E. No. 36-ST, 3 and 4-spindle Gear Roughers.
- 1—G. & E. 34" Combined Spur and Bevel Gear Cutter.
- 20—Fellows Nos. 61, 6 & 615.
- 20—Gleason bevel, 6", 11" & 18".
- 1—Lees-Bradner No. 5A gear generator.

## PLANERS

- 7—Putnam 26x26x8", 2 heads.
- 1—W. & P. 24x24x10".
- 2—Gray 38x38x20, 3 hds., mtr. dr.
- 1—Putnam 48x48x12", 2 heads.

## GRINDERS

- 1—Queen City 14x72 plain.
- 7—Norton 6x32, 10x36, 16x36.
- 1—Springfield 12x12x48 vert.
- 4—Cincinnati No. 2, 12x36.
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- 1—Landis 18x68 crank.
- 1—Fitchburg 12x54.
- 12—Bryant Nos. 20 & 6 chucking.
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Also 500 other tools, such as Shapers, Presses, Bolt Cutters, Broaching Machines, Hot and Cold Saws, Punches and Shears, etc.

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12"x 5' Cleveland, geared head.  
14"x 6' Carroll-Jamieson, new, q. c.  
14"x 6' Hamilton, grd. hd., motor dr.  
14"x 8' Monarch, quick change.  
14"x 6' Sebastian, c. r., h. d., mtr. dr.  
14"x 8' Sidney, double back geared.  
14"x 6' Hamilton, style B.  
16"x 8' Sidney, double back geared.

18"x10' American, quick change.  
20"x 8' American, geared head.  
20"x10' Hamilton, rapid production.  
22"x10' Greaves & Klusman.  
24"x24' Prentice, with raising block.  
27"x 8' Bridgeford, heavy duty.  
8x60" & 34x60" Fitchburg, Lo-Swing.

### TURRET LATHES and SCREW MACHINES

No. 4 Defiance, 14" capacity.  
No. 4 Woods Tilted Turret.  
14" Milholland.  
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No. 1 Foster, 15/16" capacity, (2).  
Warner & Swasey No. 2.  
Warner & Swasey No. 4.  
Nos. 52 & 56 National Acme auto.

### SHAPERS

14" Niles, traveling head.  
14" Steptoe, crank.  
16" American tool room.  
16" O. & S., back geared, new, low price.

16" American back geared crank.  
16" Cincinnati b. g., motor drive.  
16" Barker back geared crank.  
24" O. & S. back geared crank.  
24" Gould & Eberhardt b. g. crank.

### PRESSES

Nos. 3-A & 5-A Willard inclinable.  
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Nos. 14, 2, 24 & 4 Robinson, new.

Emco, bench, for radio parts.  
No. 35 Niagara straight side.  
Perkins, dbl. housing, wt. 4,000 lbs.

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3' W. E. Gang plain.  
No. 1 Bausch multiple.  
4' Plain Universal Radial Drill Co.  
Electric Drills, Black & Decker.  
No. 4 Duntley electric.

22", 24", 26", 28" and 32", sliding hd.  
6' Ceiling Drill.  
4-spindle Reed sensitive.  
44" Stover.

### MILLING MACHINES

No. 1 Kempsmith universal, new.  
No. 2 Kempsmith plain.  
No. 3 Kempsmith plain, new.  
No. 3 Cincinnati universal.  
No. 34 Fox.

No. 25 Hecker plain, power feed.  
No. 2 H Brown & Sharpe plain.  
Oesterlein 24x7x18 plain.  
Briggs "A" high duty, 24x8" table.  
No. 7 Becker, Lincoln type.

### GRINDERS

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16"x42" Landis universal.  
36" and 60" Yates plate.  
No. 70 Heald internal.

No. 60 Heald cylinder.  
Schmitt cylinder grinder.  
No. 3 Ohio universal, tool and cut.  
No. 4 Gardner 20" double disc.  
No. 10 Besly 18" double disc.  
No. 20 Bryant, chucking.  
Capital internal, new, 2"x2" cap.

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Band saw, Clark, compound.  
Band saws, Napier 4"x4", 10"x10".  
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Broaching mchs., 1 and 3 LaPointe.  
Positive pres. blower, No. 5 Conner.  
Compressors, 6x8, 8x8 and 9x8.  
Drawing tables, adjust., 42"x6" top.  
Gear cutter, No. 3-26 B. & S.  
Gear miller, Bilton No. 1.  
Hammer, No. 1 Pettingell.  
Hammer, 150 lb. Standard drop.

Pipe machines, 2", 4" & 6".  
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Punch & shear, 1x10" throat.  
Punch & sh'r, No. 4 H. & J., 52" thrt.  
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Nos. 2, 3, 4 & 5-A.  
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Sceleroscope, Shore type C.  
Shear, 60" Peck, Stow & W., 18 ga.  
Shear, No. 362 Robinson.  
Shear, No. 20 Quickwork, 30" throat.  
Shear, circular, Pettingell, 60" thrt.  
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Threading mche., W. & P. 2-spindle.

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<b>BORING MILLS:</b>	30" Bullard Vertical.....	\$200.
	36" / 48" Bridgeport Extension, 1 swivel head...	300.
	96" Niles, 2 heads.	
<b>DRILLS:</b>	5' Baush Radial, motor drive, with motor.....	\$300.
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	21"x12' Johnson, hollow spindle, taper attach....	200.
	24"x16½' Johnson, solid spindle.....	275.
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	27"x12' Pittsburgh.....	500.
	42"x30' Pond, triple geared.....	900.
	24"x6' Gisholt Turret, 6½" hol. spdl. ....	850.
	3"x36" Jones & Lamson Flat Turret.....	700.
	3"x36" Jones & Lamson Flat Turret.....	600.
<b>MILLING MCHES.:</b>	No. 5 Brown & Sharpe Plain.....	\$675.
<b>PRESSES:</b>	Double Cam Action, 4" stroke.....	\$100.
	Double Acting Drawing, 3¼" stroke.....	125.
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	40 lb. Bradley Cushioned Helve.....	150.
	800 lb. Bement Single Frame Steam Forging...	475.
	2000 lb. Bement Steam Drop.....	475.
<b>SHAPERS:</b>	14" Lodge & Davis S. G. ....	\$150.
	20" Cincinnati B. G. Crank.....	375.
	24" Gould & Eberhardt B. G. Crank.....	400.
	28" Ohio Double Geared.....	300.
<b>MISCELLANEOUS:</b>	Air Compressor, Chicago 12x14, cap. 275 cu. ft.	\$500.
	Crane, Panama Portable, 2½-ton.....	60.
	Hoist, Euclid 3-ton Electric.	
	Pipe Folder, 32" hand power for 24 gauge.....	\$ 20.
	Pipe Machine, Eaton-Cole-Burnham 1" to 4" ..	200.
	Pipe Machine, Eaton-Cole-Burnham 2½ to 8" ..	350.
	Planer, Pratt & Whitney 24½"x26"x6', 1 hd.	400.
	Saw, Clem Cold, 22" dia., cap. 6" round .....	100.
	Shear, Waterbury-Farrel Rotary, about 16 gauge	40.
	Slotter, 10" Bruckton.....	250.

## RUSSELL MACHINE COMPANY

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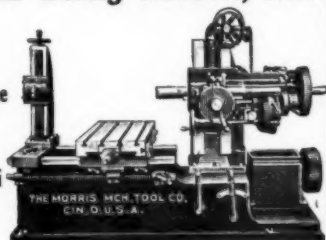
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## Morris Horizontal Drilling and Boring Machine, New

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**\$1,350**

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CINCINNATI, OHIO

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36" Bullard, with turret head and side head.	Lucas Horizontal, 3" bar.
	Universal Horizontal, 24" bar.

### BROACHING MACHINES

No. 1 J. N. La Pointe.	No. 3 American.
------------------------	-----------------

### DRILLS

2" American Radial.	24-Spindle Harrington.
3" Fostick Radial.	24" Baker.
6" Gang Radial.	20 to 36" Upright.

### LATHES

12" to 32" swing.

### MILLERS

No. 34 Ohio plain.	A B Becker vertical.
No. 3 Kempsmith plain.	C Becker vertical.
Nos. 2 & 3 Cincinnati vertical.	U. S. Hand.

### TURRET LATHES

No. 2-A Warner & Swasey Univ.	No. 2 Warner & S. Fox G. H.
No. 2 Warner & S. Hol. Hex.	No. 3 Warner & S. Fox G. H.

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5' American Radial, Latest Type, Perfect.....	\$2300.
3' Bickford Radial Drill, S. P. D., tapping att.	700.
24" Cincinnati Shaper, Hvy. Duty, fine condition	775.
No. 3C Brown & S. Universal Miller, late type	1200.
No. 6 Quickwork Rotary Shear, 95% new, capacity 1" plate.....	3750.
30" Gang Radial Drill, geared feeds, cone drive	300.
Allen Riveter, 1" capacity .....	300.
21"x8' LeBlond Heavy Duty Lathe, latest type, D. C. motor.....	1000.
18"x36"x10' Putnam Gap Lathe, late type, q. c. g., d. b. g.....	900.
72" Brown & Sharpe Gear Cutter.....	1500.
30"x30"x8' Pond Planer, two heads, A-1 shape	350.
30"x30"x12' Pease Planer, sgl. hd., perfect shape	500.
36"x33' Putnam Triple Grd. Lathe, motor drive	1250.
No. 3 LeBlond Plain Miller.....	675.
No. 2 Rockford Plain Miller, late type.....	700.
16" Hendey Shaper, vise and countershaft, fine shape .....	185.
36"-54"-84" and 96" Power Squaring Shears, A-1.	

**And many other Good Used Machine Tools at Fair Prices**

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- 3—No. 1 Cincinnati Back Geared Plain Milling Machines, each.....\$ 275.00.
- 3—3' American Sensitive Radial Drills, ea. 250.00.
- 2—36" Brown & Sharpe Gear Cutters, ea. 950.00.
- 1—10x48 Brown & S. Plain Grinder..... 1200.00.
- 2—24" Gisholt Turret Lathes, each..... 1000.00.
- 4 Spdl. NATIONAL ACME Screw Machines.
- 6—No. 52 7/8" Capacity, each.....\$ 425.00.
- 6—3/4" Cincinnati Automatic 5-sp. Screw Mchs., cap. 3/4" diameter, 3' length, ea. 1100.00.

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**Cincinnati Automatic Machine Co.**  
Cincinnati, Ohio

## Surplus Machine Tools

- 1—No. 3 Diamond Automatic Surface Grinding Machine, belt drive, capacity of 48"x12"x12".
- 6—Whitcomb Planers, second belt drive, 17"x20"x6' table.
- 1—Fitchburg Planer, 18"x8' table.
- 1—14"x8' Flather S. B. G., Q. C. G., C. R., taper attachment, Lathe.
- 1—14"x6' Reed S. B. G., L. C. G., C. R. Lathe.
- 1—16"x10' Reed S. B. G., L. C. G., C. R. Lathe.
- 1—16"x 6' Flather S. B. G., Q. C. G., C. R. Lathe.
- 1—20"x11' Flather S. B. G., Q. C. G., C. R. Lathe.
- 1—30"x13' Blaisdell S. B. G., L. C. G., C. R. Lathe.
- 1—13"x 6' Miller Speed Lathe.
- 1—10"x72" Brown & Sharpe Plain Cylindrical Grinder.
- 1—12"x36" Cincinnati Universal Grinder.
- 1—3' Arm Baush & Harris Radial Drill, belt drive.
- 2—Blount Wet Tool Grinders 14".
- 1—Whiton Automatic Gear Cutter, with rack cutting attachment.
- 1—No. 3 Lapointe (Hudson) Broaching Machine.
- 1—14" Barnes Upright Drill.
- 5—No. 2 Corey Straightening Presses.
- 1—20 H. P. General Electric Motor, 1800 r. p. m., 550 v., 60 cy., 3 ph.

**The Hurlbut, Rogers Machinery Co.**  
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ATTRACTIVE PRICES

MONEY BACK GUARANTEE

TESTED BEFORE SHIPMENT

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- 1-32" Smith Mills Shaper.
- 1-25" Queen City Shaper.
- 2-24" Cincinnati, cone.
- 1-24" Gould & Eberhardt, cone.
- 1-24" Cincinnati Cone Shaper.
- 1-20" Ohio Shaper.
- 1-20" Kelly b. g., cone.
- 1-20" Smith Mills, b. g.
- 1-16" American, motor drive.
- 1-16" Smith Mills, cone.
- 1-15" Potter-Johnston Shaper.
- 2-36" Industrial Slotters.
- 1-36" Bement Slotter.
- 2-24" Bement Slotters.
- 1-20" Bement Slotter.
- 1-15" Newton Slotter.

## Automatics

- 10-24, 34 & 44 Gridley, single spindle, motor drive.
- 4-44" Gridley, four spindles.
- 2-44" Gridley, one spindle.
- 1-44" Cleveland, single spindle.
- 2-36" Cleveland, single spindle.
- 1-24" Cleveland, single spindle.
- 2-00 B. & S. Turret Forming.
- 4-0 B. & S. Automatics.
- 1-0 B. & S. Cut-off.
- 1-18"x7" New Britain.

## Planers

- 1-72" x 72" x 18' Detrick-Harvey Latest Type Openside, 3-heads, motor drive.
- 1-60"x60"x26' D. & H. Open-side.
- 1-60"x60"x14' Powell heavy.
- 1-60"x60"x22' N.-B.-P.
- 1-60"x60"x12' Gleason.
- 1-42"x42"x26' Pond Planer four heads, rev. m. d.
- 1-36"x36"x20' Woodward-Powell, like new, reversing motor drive.
- 1-36"x36"x14' N.-B.-P. gear box, 2 heads, belt or m. d.
- 1-30"x30"x18' Cincinnati.
- 1-24"x24"x12' American, 2 heads.
- 6-24"x24"x6', 8' and 10' Whitcomb Second Belt Drive Planers.

## Turret Lathes

- 3-24" Gisholt, big bore.
- 2-64" Bardons & Oliver.
- 1-24" Garvin, g. f. h.
- 3-24"x11" Acme, g. f. h.
- 3-No. 3 Warner Swasey turret.
- 1-No. 3-A Warner & Swasey tur.
- 6-3x36 Jones & Lamson flat.
- 1-3x36 Hartness, double spindle.
- 6-18" Libby rapid production.
- 2-24"x10" Millholland.
- 1-No. 22 Garvin Monitor.
- 1-8"x44" Pratt & Whitney.
- 7/16"x24" P. & W. turret.
- 8-2"x26" P. & W. turret.

## Vertical Boring Mills

- 2-24" Bullard R. P., side head.
- 1-30" Gisholt vertical turret.
- 1-34" Bertram (Niles) turret.
- 1-36" Vertical turret and side.
- 2-42" Bullard, two heads.
- 1-64" Colburn, two heads.
- 1-60" Cincinnati, two swivel hds.
- 1-72" Niles, two swivel heads.
- 1-84" Pond special X heavy, two swivel heads, gear feeds.
- 1-84" Niles-Bement-Pond, 2 heads, gear box, motor drive.
- 1-4" Bar Niles Horizontal Mill.

## Miscellaneous

- 1-C-5 Ferracute Press.
- 10-Henry-Wright 4-spindle Drills.
- XB-2 Ingersoll-Rand Compressor
- 2-B Gorton Cut-off Machine.
- 40-A Thompson Butt Welder.
- Rennerfelt Electric Furnaces.
- LaPointe Broaching Machines.
- 8" Bignall Keeler Pipe.
- Rockford Balancing and Drilling.
- Hilles-Jones Guillotine Shear.
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48"x50" Amal. h. d. gun boring.  
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48"x16" Putnam h. d. production.  
36"x32" Bridgeford grd. hd., q. c. g.  
30"x16" LeBlond h. d., q. c. g.  
24"x12" American, q. c. g.  
24"x 8" LeBlond, q. c. g.  
20"x10" Davis, q. c. g.

### PLANERS

60"x60"x18" Pond 2-heads.  
48"x48"x20" N. B. P. 2-heads.  
48"x48"x 8" Sellers 1-head.  
36"x36"x21" Gray 2-heads.  
30"x30"x20" Wood. & Powell 2-hds.  
22"x22"x 5" Gray, 1-head.

### SHAPERS

30" Norton.  
24" Steptoe.  
20" Smith & Mills.  
16" Stockbridge.

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No. 7-H Becker Lincoln type.  
No. 2½ Hendey Lincoln type.

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30" American, t. a.  
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6" Dreses.  
4" Dreses.

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20"x54" Diamond wet surface.  
16"x68" Landis crankshaft.  
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48" Throat Cleveland 1" cap.  
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No. 75½ Bliss straight side, 6" Str.  
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12" L. & A. style-A Forming Press.  
750-1000-1500 ton Mesta Presses.  
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Nos. 2, 3, 4 Wood Tilt. Tur. Lathes.  
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 TOLEDO No. 165½ Toggle Drawing Press.  
 TOLEDO No. 167 Toggle Drawing Press.  
 TOLEDO No. 168½ Toggle Drawing Press.  
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 CONSOLIDATED No. 65 Geared Straight Side Press.  
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- 3—No. 56 Toledo, grd. s. shear.

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- 3—No. 1 $\frac{1}{2}$  Bliss, friction clutch.

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- 2—No. 202 Bliss, 5 plungers.

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## SOLID BACK PRESSES

- 1—No. PG6 Ferracute geared.
- 1—No. 35P Toledo, plain.
- 1—No. 23 V. & O. combination.

## ADJUSTABLE BED PRESSES

- 1—No. 147 Toledo, grd. bed 30x20
- 7—No. 83 Consolidated.
- 1—No. 3A Bliss.
- 1—No. 42 V. & O.

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26" Rockford Sliding Head Drill.

No. 13 Brown & Sharpe Gear Cutter.

No. 1 Norton Cutter & Tool Grinder.

No. 3 Bath Univ. Grinder.

No. 2 Brown & Sharpe Surface Grinders.

5x18 Ott Cylindrical Grinder.

6x32 Norton Cyl. Grinder.

No. 14 Gardner Disc Grinder.

14x6 American Geared Head Lathe.

16x6 Lodge & Shipley Lathe.

20x8 American G. H., M. D. Lathe.

42x20 Bridgeford G. H., M. D. Lathe.

12" Smith & Mills Shaper.

14" Gould & E. Shaper.

16" Milwaukee Shaper.

16" Garvin Shaper.

20" Gould & E. Shaper.

Nos. 00, 2, & 2-G Brown & Sharpe Automatics.

Nos. 0, & 1 Brown & Sharpe Semi-Automatics.

No. 1 Cochrane-Bly Cold Saw.

Smith Automatic Novelty Wood Turning Lathe.

No. 20 American Universal Saw Bench.

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Act now! This is but a partial list.  
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- 1-51"x20' LeBlond.
- 3-36"x37' Niles Bement Pond.
- 4-36"x30' Pittsburgh Geared Hd.
- 1-32"x12' Pittsburgh.
- 2-30"-34"x12' L. & S. Sel. Hd.
- 21-28"x10' Canada.
- 15-25"x12' LeBlond.
- 5-25"x10' LeBlond.
- 1-24"x15' Chard.
- 1-24"x12' Reed Prentice Grd. Hd.
- 9-24"x11' Cisco.
- 1-24"x10' American.
- 10-21"x10' LeBlond.
- 5-20"x16' American.
- 5-20"x12' American.
- 5-20"x 8' LeBlond.
- 2-20"x14' American G. H.

## MILLERS

- 3-No. 5-C Becker Vertical.
- 6-No. 3 Brown & Sharpe Vert.
- 3-No. 3 Cincinnati Vertical.
- 1-No. 2B Milwaukee Vertical.
- 2-No. 4-B Becker Vertical.
- 3-No. 4 LeBlond Plain.
- 4-No. 4 Cincinnati Plain.
- 7-No. 3-B Hvy. Brown & Sharpe.
- 8-No. 3 Kempsmith Plain.
- 4-No. 2-B Hvy. Brown & Sharpe.
- 1-No. 2 Rockford Plain.
- 1-No. 2 Kempsmith Plain.
- 1-No. 1 1/2 LeBlond Plain.

## PLANERS

- 1-72"x56"x36' Cincinnati.
- 1-42"x42"x18' Rockford.
- 3-36"x36"x18' Cincinnati.
- 1-36"x36"x12' Woodward & P.
- 2-36"x36"x10' Bickett.
- 1-24"x24"x 6 American.

## PRESSES

- 1-96-G Toledo Double Crank.
- 2-No. 56 Ferracute.
- 1-No. 163 1/2 Toledo Toggle.

## BORING MILLS—Vertical

- 5-72" Gisholt.
- 1-72" Cincinnati.
- 1-60" Pittsburgh.
- 1-52" Gisholt.
- 1-30" Bullard.
- 1-24" Bullard Rapid Production.

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- 1-No. 1 1/2 Bar Beaman & Smith.
- 1-No. 350 Giddings & Lewis.
- 7-Rockford.
- 1-3" Foote-Burt.

## DRILL PRESSES

- 1-No. 513 Baker.
- 1-No. 310 Baker.
- 1-No. 24 Foote-Burt.
- 2-No. D-2 Colburn.
- 2-22" Barnes all geared.
- 19-No. 1-K 8" Henry & Wright.

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- 1-7" Western.
- 1-6" Niles-Bement-Pond.

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- 4-22" P. & W. Vert. Surf.
- 1-20"x36" Landis.
- 1-18"-30"x36" Norton Gap.
- 3-14"x50" Norton.
- 4-12"x36" Modern.
- 2-10"x72 Landis.
- 3-10"x72" Norton.
- 2-10"x36" Norton, M. D.
- 2-6"x18" Landis.

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 30, 50, 100, 200 lb. Bradley Upright Hammers.  
 60, 80, 100, 200 lb. Bradley Cushioned Helve Hammers.  
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 2000 lb. Erie Steam Forging Hammer.  
 Pels, Type GEF 30, Comb. Angle & Bar Shears, 6x6x1" angles.  
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 1", 1½", 2" single spindle Threading Machines, Acme and Landis.  
 1", 1½", 2", 2-spindle Threading Machines, Acme and Landis.  
 1" 3-spindle Landis Threading Machine.  
 2" and 4" Landis Pipe Threading Machines.  
 No. 60 Waterbury-Farrel Thread Roller.  
 1" 8-spindle National vertical semi-automatic Tapper.  
 4" & 1½" 6-spindle Acme vertical semi-automatic Tapper.  
 No. 2 Kempsmith Universal Milling Machine.  
 No. 19, 53" Besly Vertical Spindle Disc Grinder.  
 No. 6B High Speed Riveting Hammer.  
 No. 3 Wilmarth & Morman Surface Grinder, with magnetic chuck.  
 3—Racine Power Hack Saws, capacity 6x6", 3-speed gear box.  
 Cincinnati Tu-Speed heavy duty Planer, 30"x30"x14'.  
 General Electric Centrifugal Compressor, 3300 cu. ft. 1½ lb. pressure, 30 h. p., a. c. motor.  
 Detroit 5-spindle Semi-automatic Drill.

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*Bolt and Forging Machinery Specialists*

**1147 So. Washtenaw Ave., Chicago, Ill.**

## SPECIALS

Brown & Sharpe Millers—No. 3 Vertical; No. 3 Universal, with vertical attachment; Nos. 2-B and 3-B Plain, single pulley drive.  
 Model AB Becker Vertical, \$375.  
 Cincinnati Planers, 1—33"x33"x10'; 1—24"x24"x8'.  
 Gray Planers; 1—30"x30"x16'; 1—24"x24"x6'.  
 Cisco Lathes; 2—16"x8', q. c.; one 1—16"x8', q. c.  
 Mueller Lathes—18"x8' and 18"x6', q. c.  
 New Britain Automatic, 6 spindle, 1½" x7".  
 Detrick & Harvey Open Side Planers, 1—24"x24"x8'; 1—48"x16'.  
 24"x14' Schumacher & Boye Q. C. Lathes.  
 24"x12' Lodge & Shipley Q. C. Lathe, patent c. s.  
 2—26"x16' Bridgeford Lathes, with taper.  
 26"x8" Pittsburgh Lathe, q. c., taper, 3-step, d. b. g.  
 Norton Cylinder Grinder, 18"x36", \$1000.  
 48"x28" Niles Triple Geared Lathe, \$1550.  
 46"x18" New Haven Triple Geared Lathe, raised to 62", \$1300.  
 6' Niles Universal Radial, with motor, \$1050.  
 42" Bullard Boring Mill, 2 heads, \$1450.  
 Style A Long & A. Punch and Shear, 24"x1", with arch. jaw, \$750.  
 Shapers—24" Gould & Eberhardt; 16" Steptoe; 15" Kelly.  
 Lucas Forging Press, 50-ton cap. Bliss Presses, Nos. 18 and 20.  
 Morse Grinder, 6"x30". No. 5 Toledo Inc. Press, \$425.

*More than 300 other Machines in Stock. Low Prices.*

**Norton-Broadway Machinery Co., Cincinnati, Ohio**

# Opportunity Knocks Again For the Conservative Buyer

*Real Values in Machine Tools—*

## Planers

72"x54"x24" Pond, 4 heads.  
72"x72"x18" Betts, 4 heads.  
36"x36"x24" Pond, 4 heads.  
36"x36"x12" Woodward & P., 3 hds.  
36"x36"x 8" Dietrick & H., openside.  
26"x26"x 8" Pease.

## Boring Mills

96" Niles, 2 heads.  
2—54" Bullard Maxi.  
2—42" King.  
2—Blomquist & E., horiz., 3¼" bars.

## Hammers

5000 lb. Chambersburg.  
4000 lb. Chambersburg.  
4000 lb. Massillon.  
3500 lb. Massillon.  
2500 lb. Massillon.  
2—800 lb. Waterbury Farrell board.  
2—600 lb. Waterbury.

## Grinders

10x50 Norton plain.  
8x36 Fitchburg.  
16x48 Landis crankshaft.  
No. 2 Brown & Sharpe universal.  
No. 2 Taft Pierce universal.  
Heim's Centerless, motor drive.  
No. 4 Detroit Centerless, motor drive.  
10x30 Webster & Perks universal.

## Screw Machines

3¼" Griley.  
1¼" Griley.  
No. 55 National Acme.  
No. 53 National Acme.  
No. 52 National Acme.  
No. 00 Brown & Sharpe.  
No. 0 Brown & Sharpe.  
2" Cleveland Model B, New.  
2" Cleveland Model B.  
3¼" Cleveland Model A.  
2¼" Cleveland Model A.  
No. 20, ½" — ¾" Cleveland Model B.  
No. 6 Warner & Swasey.  
No. 6 Foster.  
24" Gisholt, complete equipment.  
18" Gisholt, complete equipment.

## Lathes

48"x21" Pond, triple grd., motor drive.  
44"x45" Putnam, triple grd., motor dr.  
40"x14" Alliance Geared Head.  
32"x12" No. 3 Pittsb'gh, g.c., h.d., c.dr.  
30"x16" Reed, cone drive.  
30"x28" Pond, triple grd., motor drive.  
24"x16" Whitcomb-Blaisdell, cone dr.  
20"x14" Reed, plain change, cone dr.  
21"x10" Boye & E., qk. ch., cone dr.  
20"x10" Hendey Yoke Head.  
14"x 6" Hendey, t. a., qk. ch. collets.  
14"x 6" Hendey, t. a., draw-in attachment, relief. attachment.

## Drills

6" Niles Radial.  
5" Bickford, t. a., motor drive.  
36" Aurora, g. f.  
4-spindle Leland-Gifford, ball bearing.  
3-spindle Leland-Gifford, ball bearing.  
12-spindle Baush Drill.  
6-spindle Foote-Burt No. 5 Taper.  
No. 2 Colburn, h. p., (New).  
No. 25 Foote-Burt.  
No. 4 Mueller Radial, s. p.

## Milling Machines

No. 4 LeBlond plain.  
No. 3 Brown & Sharpe plain.  
No. 2 Brown & Sharpe plain.  
Gooley & Edlund slab.  
12" Cincinnati mfg. type.  
84 Pratt & Whitney Thread Miller.  
No. 3 U. S. Hand Millers.  
No. 2—13B Brown & S., plain.  
2 No. 2 Garvin Duplex.  
2M—Potter & Johnston.  
2A—Milwaukee, s. p. drive, plain.

## Miscellaneous

50-ton 60" Span Alliance Crane.  
4½" Acme Bolt Cutter.  
Hendey Centering.  
36" Fellow's Gear Shaper.  
18" Gleason Bevel Gear Generator.  
4-Spindle Moline No. 1 Hole Hog.  
60" Gould & Eberhardt Gear Cutter.  
30" Schuchardt & S. Gear Hobber.  
3" National Bolt Cutter.  
No. 20 Bliss Punch Press.

**The EMPIRE MACHINERY EXCHANGE CO., Inc.**

Offices and Warehouses: 2261 E. 14th St., Cleveland, Ohio

# Machinery Bargains

42"x42"x16' Cleveland Open Side Planer, 3 heads, arranged motor drive..... \$4250.

Brown & Sharpe No. 3 Vertical Milling Machine ..... \$1600.

Brown & Sharpe No. 13-B Production Miller..... \$1300.

NEW LeBlond No. 4 Pl. Miller \$1500.

**H. A. Smith Machinery Co.**  
Syracuse, New York

## Special Bargains in Used Machine Tools

- 1—No. 9-G Brown & Sharpe Automatic Screw Machine with slotting attachment and attachment driving stand.....\$ 875.
- 2—No. 3-26" Brown & S. Automatic Gear Cutting Machines with pump, c. s., change gears, feed gears and wrenches ea. 700.
- 1—No. 3 Heavy Brown & Sharpe Automatic Gear Cutting Machine, capacity 24"x8" (Practically New)..... 1800.
- 1—No. 11 Brown & Sharpe Grinder with countershaft, pump, center grinding attachment, one steady rest, three universal back rests and one plain back rest..... 350.
- 1—12"x48" Modern Plain Cylindrical Grinder, carrying wheel 18" dia., 2" wide, 5" hole, and with self contained countershaft for belt drive..... 650.
- 1—No. 2 Cincinnati Plain Milling Machine, cone drive, with c. s., all feeds, vise, 10" univ. index centers, three arbors... 800.
- 1—25"x18" LeBlond Heavy Duty Quick Change Gear Engine Lathe with steady rest, guards, 24" face plate, pump and piping, motor driven by Westinghouse 15 h.p. 220-volt, d.c. mtr. 1250.
- 1—Practically new Niagara No. 2120 Power Squaring Shear, capacity 14 gauge by 10' ..... 1000.

**THE E. A. KINSEY CO.,** 335 West **CINCINNATI, O.**  
Fourth Street,  
**BRANCHES:** INDIANAPOLIS, IND., HAMILTON, OHIO, DAYTON, OHIO,  
LOUISVILLE, KY., COLUMBUS, OHIO



# Rebuilt and Tested

12' BETTS vertical boring mill, 2 swivel heads.  
 96" Niles vertical boring mill, 2 swivel heads.  
 96" Betts vertical boring mill, 2 swivel heads.  
 60" Bullard vertical boring mill, 2 swivel heads.  
 52" Niles-Bement-Pond, 2 swivel heads.  
 42" King vertical boring mill, 2 swivel heads.  
 42" Bullard vertical boring mill, 2 swivel heads.  
 16" Cox pipe threading and cutting-off machine.  
 10 and 12" Cox pipe threading & cutting-off machine.  
 8" Stoeber pipe threading and cutting-off machine.  
 6' Western radial drill, single pulley drive.  
 5' Bickford of Cincinnati radial, belt driven.  
 4' Reed Prentice radial, single pulley drive.  
 24" Cincinnati single pulley drive shaper.  
 16" Stockbridge shaper, belt driven.  
 No. 5 Brown & Sharpe 48" gear cutter.  
 No. 3 Brown & Sharpe 26" gear cutter.

## Bertolette Machine Tool Co., Inc.

222-234 Culver Ave., Jersey City, N. J.

# Good Used Tools

## Lathes

Hendey 14"x 6', t. a. .... \$ 350.  
 Champion 13"x 8', new ..... 350.  
 Lancaster 16"x 8', new..... 375.  
 Conradson 25"x 10', m.  
 d., new ..... 1875.

## Shapers

Kelly 14" ..... \$ 200.  
 American 18" ..... 350.  
 Walcott 20" ..... 225.  
 Cincinnati 16" ..... 375.

## Drills

Avey 3-sp. high-speed \$ 575.  
 Canedy-Otto 3 1/2' ..... 275.  
 American 4', s. p. d. .... 1150.

## Grinders

LeBlond No. 1 univ. .... \$ 225.  
 Cincinnati No. 1 univ. ... 225.  
 Pratt & W. 3' surface... 675.  
 Norton 14"x 72" plain... 775.  
 Norton 6'x 32" plain.... 475.  
 Gorton 18" disc..... 250.

## Milling Machines

Whitney No. 6, hand... \$ 65.  
 Steptoe No. 0, new ..... 275.  
 LeBlond No. 3 plain..... 525.  
 Conradson No. 3 univ... 1950.  
 Becker No. 3 vertical ... 275.

## Miscellaneous

New 1-ton Elec. Hoists 150.

## Louis E. Emerman & Co.

1761 Elston Ave., Chicago, Ill.

# Classified Finding Index

**Air Compressors, Electric**  
Patrick Bros., 2236 Belmont Ave., Chicago

**Air Guns**  
Powell Co., Wm., Cincinnati

**Angle and Surface Plates, Universal.**  
Advanced Engineering Co., San Francisco

**Arbors, Solid**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.

**Auto-Gages For Dies**  
Dandy Machine Specialties, Inc., 4913 Lincoln Ave., Chicago

**Automatics**  
Cleveland Automatic Machine Co., Cleveland, O.  
National Acme Company, Cleveland, O.  
New Britain Machine Co., New Britain, Conn.

**Balancing Ways**  
Anderson Bros. Mfg. Co., Rockford, Ill.  
Blowher Co., N. F., South Bend, Ind.

**Balls, Bearing and Burnishing**  
Abbott Ball Co., Hartford, Conn.

**Band Saw Machines, for Metal**  
Armstrong-Bloom Mfg. Co., 341 N. Francisco Ave., Chicago  
Porter-Cable Machine Co., Syracuse, N. Y.

**Barrels, Tumbling**  
Abbott Ball Co., Hartford, Conn.  
Scully-Jones & Co., 2012 W. 13th, Chicago

**Bench Legs, Steel**  
New Britain Mch. Co., New Britain, Conn.

**Bending Machines, Hand and Power**  
Armstrong-Bloom Mfg. Co., 341 N. Francisco Ave., Chicago  
Hendley & Whittemore Co., Beloit, Wis.  
Lewthwaite Mch. Co., T. H. 4178, St. N. Y.  
Lourie Hydraulic Co., Springfield, Ill.  
Pedrick Tool & Machine Co., Philadelphia

**Bending Rolls**  
Hendley & Whittemore Co., Beloit, Wis.

**Bolt and Nut Machinery**  
Economy Engineering Co., Willoughby, O.  
Foote-Burt Co., Cleveland, O.

**Boring Bars**  
Pedrick Tool & Machine Co., Philadelphia

**Boring Bars, Cylinder**  
Pedrick Tool & Machine Co., Philadelphia

**Boring, Drilling & Milling Machines**  
Landis Tool Co., Waynesboro, Pa.

**Boring Machines, Horizontal**  
Avey Drilling Machine Co., Cincinnati  
Pedrick Tool & Machine Co., Philadelphia

**Boring Tools**  
Maxwell Products Co., Cleveland, Ohio.  
Kibbe & Grey, La Porte, Ind.

**Boring and Turning Machines, Vertical**  
Cincinnati Planer Co., Cincinnati, Ohio

**Bulldozers, Hydraulic**  
Lourie Hydraulic Co., Springfield, Ill.

**Burnishing Equipment, Ball**  
Abbott Ball Co., Elmwood, Conn.

**Calipers, Vernier**  
Scherr Co., George, 143 Liberty St., N. Y.

**Case-Hardening Compound**  
Kassett Company, 2 & 4 Stone St., New York

**Chucking Machines**  
National Acme Company, Cleveland, O.  
New Britain Mch. Co., New Britain, Conn.  
Springfield Machine Tool Co., Springfield, O.

**Chucks, Collet**  
Ames Co., B. C., Waltham, Mass.  
Hardinge Brothers, Inc., 1770 Berteau Ave., Chicago

**Chucks, Drill**  
Barber-Colman Co., Rockford, Ill.  
Eastern Tube & Tool Co., Inc., 580 Johnson Ave., Brooklyn, N. Y.  
Jacobs Mfg. Co., Hartford, Conn.  
Scully-Jones & Co., 2012 W. 13th, Chicago  
Titan Tool Co., Erie, Pa.

**Chucks, Drill and Tap**  
Barber-Colman Co., Rockford, Ill.  
Scully-Jones & Co., 2012 W. 13th, Chicago

**Chucks, Keyway Cutting**  
Scully-Jones & Co., Ry. Exch. Bldg., Chicago

**Chucks, Magnetic**  
J. & H. Electric Co., Providence, R. I.

**Clamps, Die**  
Dandy Machine Specialties, Inc., 4913 Lincoln Ave., Chicago

**Clutches, Friction**  
Conway Clutch Co., Cincinnati, O.  
Edgemont Machine Co., Dayton, O.

**Cold Saws**  
Burke Machine Tool Co., Connecticut, Ohio

**Collets**  
Ames Co., B. C., Waltham, Mass.  
Hardinge Brothers, Inc., 1770 Berteau Ave., Chicago

**Contract Work Wanted**  
Burke Machine Tool Co., Connecticut, O.

**Counterbores and Spot Facers**  
Glenzer Co., J. C., Detroit, Mich.

**Couplings, Friction Clutch**  
Conway Clutch Co., Cincinnati, O.

**Cranes, Portable**  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Canton Foundry & Mch. Co., Canton, Ohio

**Crank Pin Turning Machine**  
Pedrick Tool & Machine Co., Philadelphia

**Cutters, Gear Shaper**  
National Tool Co., Cleveland, O.

**Cutters, Keyseating**  
Davis Keyseater Co., Rochester, N. Y.  
Scully-Jones & Co., 2012 W. 13th, Chicago

**Cutters, Milling**  
Barber-Colman Co., Rockford, Ill.  
Geneese Mfg. Co., Rochester, N. Y.  
National Tool Co., Cleveland, O.

**Cylinder Boring Machines, Portable**  
Pedrick Tool & Machine Co., Philadelphia

**Demagnetizers**  
J. & H. Electric Co., Providence, R. I.

**Dial Indicators**  
Federal Products Corp'n, Providence, R. I.

**Die Heads, Threading, Self Opening**  
National Acme Company, Cleveland, O.

**Die Sets**  
Dandy Machine Specialties, Inc., 4913 Lincoln Ave., Chicago

# Classified Finding Index

## Drill Racks

Peerless Machine Co., Racine, Wis.

## Drill Tables and Vise

Modern Machine Tool Co., Jackson, Mich.

## Drilling Machine Heads, Multiple

Gateman Mfg. Co., W., Manitowoc, Wis.  
United States Drill Head Co., Cincinnati

## Drilling Machines, Bench

Ames Co., B. C., Waltham, Mass.  
Avey Drilling Machine Co., Cincinnati  
Burke Machine Tool Co., Connecticut, Ohio  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Gateman Mfg. Co., W., Manitowoc, Wis.  
Merit Oil Equipment Co., Cleveland, O.  
Sigourney Tool Co., Hartford, Conn.  
Winterhoff Tool & Machine Co., Elkhart, Ind.  
Taylor & Fenn Co., Hartford, Conn.

## Drilling Machines, Flexible Shaft

Blax Flexible Shaft Co., 136 Liberty Street,  
New York

## Drilling Machines, Horizontal

Gateman Mfg. Co., W., Manitowoc, Wis.

## Drilling Machines, Multiple Spindle

Avey Drilling Machine Co., Cincinnati  
Foots-Burt Co., Cleveland, O.  
Foodick Machine Tool Co., Cincinnati, O.  
Gateman Mfg. Co., W., Manitowoc, Wis.  
Merit Oil Equipment Co., Cleveland, O.  
Sigourney Tool Co., Hartford, Conn.  
Taylor & Fenn Co., Hartford, Conn.

## Drilling Machines, Portable Electric

Cincinnati Electrical Tool Co., Cincinnati, O.  
Independent Pneumatic Tool Co., 600 W.  
Jackson Blvd., Chicago  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Strand Co., N.A., 5001 N. Lincoln St., Chicago  
Winterhoff Tool & Machine Co., Elkhart, Ind.

## Drilling Machines, Post

Canedy-Otto Mfg. Co., Chicago Heights, Ill.

## Drilling Machines, Radial

Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Foodick Machine Tool Co., Cincinnati, O.  
Taylor & Fenn Co., Hartford, Conn.

## Drilling Machines, Sensitive

Avey Drilling Machine Co., Cincinnati  
Burke Machine Tool Co., Connecticut, Ohio  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Foots-Burt Co., Cleveland, O.  
Foodick Machine Tool Co., Cincinnati, O.  
Gateman Mfg. Co., W., Manitowoc, Wis.  
Leland-Gifford Co., Worcester, Mass.  
Merit Oil Equipment Co., Cleveland, O.  
Sigourney Tool Co., Hartford, Conn.  
Taylor & Fenn Co., Hartford, Conn.  
U. S. Machine Tool Co., Cincinnati, O.

## Drilling Machines, Vertical

Avey Drilling Machine Co., Cincinnati  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Foots-Burt Co., Cleveland, O.  
Foodick Machine Tool Co., Cincinnati, O.  
Gateman Mfg. Co., W., Manitowoc, Wis.  
Leland-Gifford Co., Worcester, Mass.  
Merit Oil Equipment Co., Cleveland, O.  
Sigourney Tool Co., Hartford, Conn.  
Taylor & Fenn Co., Hartford, Conn.

## Dust Handling Equipment

Knickerbocker Co., Jackson, Mich.

## Emery Wheel Dressers and Cutters

Ross Manufacturing Co., Cleveland, O.  
Taylor & Fenn Co., Hartford, Conn.  
Western Tool & Mfg. Co., Springfield, O.

## Feeders, Oil and Soda Water

New Britain Machine Co., New Britain, Conn.

## Filing Machines, Die

Ames Co., B. C., Waltham, Mass.

## Filing Room Equipment

Wardwell Mfg. Co., Cleveland, O.

## Flexible Shafts

Blax Flexible Shaft Co., 136 Liberty Street,  
New York  
Strand Co., N.A., 5001 N. Lincoln St., Chicago

## Forges

Canedy-Otto Mfg. Co., Chicago Heights, Ill.

## Forgings, Hollow Bored

American Hollow Boring Co., Erie, Pa.

## Furniture, Machine Shop

New Britain Machine Co., New Britain, Conn.  
Western Tool & Mfg. Co., Springfield, O.

## Gauges, Dial

Ames Co., B. C., Waltham, Mass.  
Federal Products Corp'n, Providence, R. I.

## Gauges, Piston and Piston Ring

Federal Products Corp'n, Providence, R. I.

## Gauges, Thread

Federal Products Corp'n, Providence, R. I.

## Gear Cutting Machines

Barber-Colman Co., Rockford, Ill.

## Gears

Boston Gear Works Sales Company, Norfolk  
Downs, Mass.

## Grinding Machines, Belt

Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
Peerless Surfacing Machine Co., Troy, N. Y.

## Grinding Machines, Bench

Bodine Electric Co., 2236 W. Ohio St., Chicago  
Gallmeyer & Livingston Co., Grand Rapids,  
Mich.

## Grinding Machines, Cutter, Reamer and Tool

Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
Jarecki McKe. & T. Co., Grand Rapids, Mich.  
Landis Tool Co., Waynesboro, Pa.  
LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
Thompson Grinder Co., Springfield, Ohio

## Grinding Machines, Cylindrical

Jarecki McKe. & T. Co., Grand Rapids, Mich.  
Landis Tool Co., Waynesboro, Pa.  
Thompson Grinder Co., Springfield, Ohio

## Grinding Machines, Die

Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
Jarecki McKe. & T. Co., Grand Rapids, Mich.  
Thompson Grinder Co., Springfield, Ohio

## Grinding Machines, Disc

Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
Porter Cable Machine Co., Syracuse, N. Y.

## Grinding Machines, Drill

Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
Le Salle Tool Co., La Salle, Ill.

## Grinding Machines, Face

Taylor & Fenn Co., Hartford, Conn.

# Classified Finding Index

**Grinding Machines, Flexible Shaft**  
Biax Flexible Shaft Co., 136 Liberty Street,  
New York

**Grinding Machines, Internal**  
Landis Tool Co., Wayneboro, Pa.  
Taylor & Fenn Co., Hartford, Conn.  
Thompson Grinder Co., Springfield, Ohio

**Grinding Machines, Portable Electric**  
Rodine Electric Co., 2254 W. Ohio St., Chgo.  
Cincinnati Electrical Tool Co., Cincinnati, O.  
Independent Pneumatic Tool Co., 600 W.  
Jackson Blvd., Chicago  
Porter-Cable Machine Co., Syracuse, N. Y.  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Strand Co., N. A., 5901 N. Lincoln St., Chgo

**Grinding Machines, Snagging**  
Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
Jarecki Mch. & T. Co., Grand Rapids, Mich.

**Grinding Machines, Surface**  
Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
La Salle Tool Co., La Salle, Ill.  
Thompson Grinder Co., Springfield, Ohio

**Grinding Machines, Tap**  
Gallmeyer & Livingston Co., Grand Rapids,  
Mich.

**Grinding Machines, Tool**  
Taylor & Fenn Co., Hartford, Conn.

**Grinding Machines, Universal**  
Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
Landis Tool Co., Wayneboro, Pa.  
Thompson Grinder Co., Springfield, Ohio

**Hack Saw Blades**  
Peetless Machine Co., Racine, Wis.

**Hack Saw Machines**  
Armstrong-Blum Mfg. Co., 341 N. Francisco  
Av., Chicago  
Peetless Machine Co., Racine, Wis.  
Racine Tool & Machine Co., Racine, Wis.

**Hammers, Air**  
Independent Pneumatic Tool Co., 600 W.  
Jackson Blvd., Chicago

**Hammers, Riveting**  
Independent Pneumatic Tool Co., 600 W.  
Jackson Blvd., Chicago

**High Speed Steel, Drills, Cutters**  
Bernstein, Geo. M., 649 W. Washington Blvd.,  
Chicago

**Hobs**  
Harber-Colman Co., Rockford, Ill.  
National Tool Co., Cleveland, O.

**Hoints**  
Ford Chain Hock Co., Philadelphia, Pa.

**Hoints, Portable**  
Canton Foundry & Machine Co., Canton, Ohio

**Hydraulic Machinery**  
Lourie Hydraulic Co., Springfield, Ill.

**Keyseating Machines**  
Burr & Son, John T., Brooklyn, N. Y.  
Chattanooga Mch. Co., Chattanooga, Tenn.  
Davis Keyseater Co., Rochester, N. Y.  
National Machine Tool Co., Cincinnati

**Lathe Accessories and Attachments**  
Cisco Machine Tool Co., Cincinnati, O.  
Maxwell Products Co., Cleveland, Ohio.  
Sidney Machine Tool Co., Sidney, O.

**Lathe Turrets**  
Maxwell Products Co., Cleveland, Ohio.

**Lathes, Automatic Turret**  
National Acme Company, Cleveland, O.

**Lathes, Bench**  
Ames Co., B. C., Waltham, Mass.  
Hardinge Brothers, Inc., 1770 Berteau Ave.,  
Chicago  
Monarch Machine Tool Co., Sidney, O.

**Lathes, Engine**  
Carroll Mch. Tool Co., A. V., Cincinnati, O.  
Cisco Machine Tool Co., Cincinnati, O.  
Hardinge Brothers, Inc., 1770 Berteau Ave.,  
Chicago  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.  
Monarch Machine Tool Co., Sidney, O.  
Porter-Cable Machine Co., Syracuse, N. Y.  
Sidney Machine Tool Co., Sidney, O.  
Springfield Machine Tool Co., Springfield, O.

**Lathes, Extension Bed Gap**  
Rahn-Larmon Co., Cincinnati, O.

**Lathes, Fox Monitor**  
Barker Co., Wm., Covington, Ky.

**Lathes, Gap**  
Carroll Mch. Tool Co., A. V., Cincinnati, O.

**Lathes, Short Bed**  
Monarch Machine Tool Co., Sidney, O.  
Porter-Cable Machine Co., Syracuse, N. Y.  
Sidney Machine Tool Co., Sidney, O.

**Lathes, Turret**  
Monarch Machine Tool Co., Sidney, O.

**Mandrels, Expanding**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.  
Western Tool & Mfg. Co., Springfield, O.

**Mandrels, Solid**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.

**Milling Attachments**  
Burke Machine Tool Co., Connecticut, Ohio  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.  
Porter-Cable Machine Co., Syracuse, N. Y.  
Taylor & Fenn Co., Hartford, Conn.

**Milling Cutters**  
Harber-Colman Co., Rockford, Ill.

**Milling Machine Spacing Washers**  
Maxwell Products Co., Cleveland, Ohio.

**Milling Machines, Bench**  
Ames Co., B. C., Waltham, Mass.  
Burke Machine Tool Co., Connecticut, Ohio

**Milling Machines, Hand**  
Burke Machine Tool Co., Connecticut, Ohio  
U. S. Machine Tool Co., Cincinnati, O.

**Milling Machines, Manufacturing**  
Kearney & Trecker Corp., Milwaukee, Wis.

**Milling Machines, Plain**  
Burke Machine Tool Co., Connecticut, Ohio  
Gallmeyer & Livingston Co., Grand Rapids,  
Mich.  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.

**Milling Machines, Portable**  
Padrick Tool & Machine Co., Philadelphia

**Milling Machines, Spine**  
Taylor & Fenn Co., Hartford, Conn.

**Milling Machines, Universal**  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.

**Milling Machines, Vertical**  
Burke Machine Tool Co., Connecticut, Ohio  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.  
Taylor & Fenn Co., Hartford, Conn.

## Classified Finding Index

**Mills, Adjustable Hollow**  
Genesee Mfg. Co., Rochester, N. Y.

**Motors, Electric**  
Reliance Electric & Eng. Co., Cleveland

**Nut Setters, Flexible Shaft**  
Blax Flexible Shaft Co., 136 Liberty Street,  
New York

**Nuts, Plain or Castellated**  
National Acme Company, Cleveland, O.

**Oil Cups**  
Gits Bros. Mfg. Co., 1940 S. Kilbourn Av.,  
Chicago

**Oil Extractors**  
Harrett Co., Leon J., Worcester, Mass.  
Tolhurst Machine Works, Troy, N. Y.

**Pattern Shop Machinery**  
Towsley Mfg. Co., John T., Cincinnati

**Pins, Leader And Dowel**  
Daly Machine Specialties, Inc., 4818 Lincoln  
Ave., Chicago

**Pipe Bending Machines**  
Pedrick Tool & Machine Co., Philadelphia

**Pipe Cutting and Threading Machines**  
Chicago Pipe Thread Co., Racine, Wis.

**Piston Machines**  
National Acme Company, Cleveland, O.

**Piston Ring Machines**  
National Acme Company, Cleveland, O.

**Planing Machines**  
Cincinnati Planer Co., Cincinnati, O.  
Cleveland Planer Co., Cleveland, O.

**Planers, Valve Seat, Portable**  
Pedrick Tool & Machine Co., Philadelphia

**Polishing and Buffing Machines**  
Cincinnati Electrical Tool Co., Cincinnati, O.  
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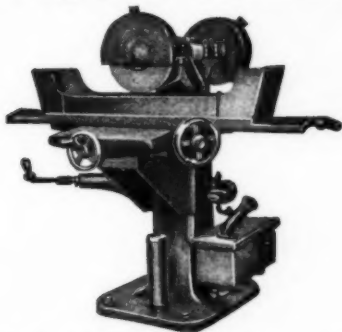
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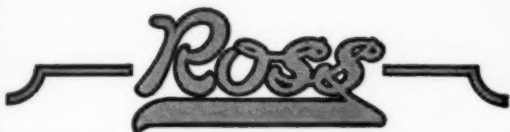
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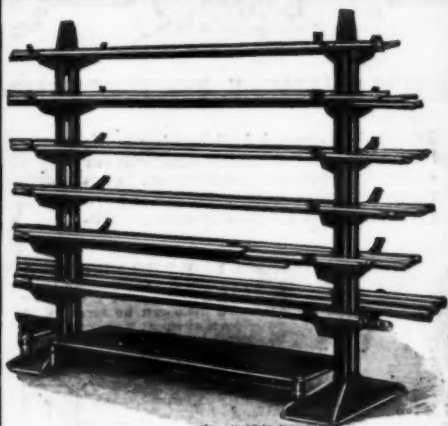
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